

Use of ICT in English Language Teaching: Teachers' Knowledge, Perceptions

and Practices



Dhurba Kumar Shahi

A Dissertation for the Degree of Doctor of Philosophy in English Education

Submitted to

Office of the Dean

Faculty of Education

Tribhuvan University

Kirtipur, Kathmandu, Nepal

July, 2024

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Supervisor

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Abstract

This study investigates English language teachers' knowledge, perceptions, and practices in integrating information and communication technology (ICT) within their classrooms. It mainly purposes to uncover their proficiency in ICT, understand their perceptions of its role, and examine its applications in language instruction.

Employing a convergent parallel mixed-methods approach within the pragmatism research paradigm, the study gathers quantitative data from 222 English language teachers through survey questionnaires and qualitative insights from 6 teachers in Sudurpaschim Province using interview guidelines and classroom observations. Geographically, Kailali, Achham, and Bajhang represent the Tarai, Hilly, and Himalayan areas, respectively, facilitating a diverse data collection process. The theoretical framework, English as a Foreign Language in Technological Pedagogical and Content Knowledge (EFL-TPACK), guides exploring the intricate relationship among technology, pedagogy, and content knowledge.

The findings indicate a moderate proficiency level among teachers, particularly in hardware usage. While a moderate familiarity exists with devices like computers and tablets, proficiency in using interactive whiteboards is particularly poor. District-wise disparities and qualification-related variations stress the necessity for targeted professional development initiatives. Employment status, having digital devices, and participation in ICT-related training as significant factors influencing proficiency, highlighting the importance of addressing these factors in context-specific interventions.

The study also investigates teachers' knowledge of educational apps, software, and internet surfing abilities, revealing a moderate proficiency. Variations across districts and qualifications, influenced by external factors such as the COVID-19

pandemic, emphasize the need for flexible and adaptable professional development approaches, recognizing the developing nature of technology in education.

Teachers' integration of ICT into pedagogical practices demonstrates a medium proficiency level, highlighting a variety of implementation rates. District-wise variations and limited influence from qualifications, experience, and employment status require appropriate strategies. The impact of digital devices, school infrastructure, and training on proficiency emphasizes the crucial role of supportive environments and comprehensive professional development. Qualitative vignettes highlight various approaches to ICT integration, underscoring the necessity for a holistic professional development approach.

While teachers express positive perceptions of ICT as a motivational tool and a means for continuous professional growth, the study identifies areas for improvement, such as creating more engaging learning activities. The effective use of ICT in the classroom encourages student engagement and supports their learning process.

The study suggests a comprehensive implementation plan to improve ICT integration, involving detailed district assessments, funding, professional development programmes, collaboration platforms, mentorship initiatives, and continuous assessment mechanisms for ongoing infrastructure development. The plan emphasizes promoting student-centered environments, addressing digital devices, and regular policy reviews aligned with emerging educational technology trends. In addition, the study advocates for flexible policies, teacher involvement in policy development, ongoing professional development on emerging technologies, and collaborative platforms for knowledge sharing among English language teachers, districts, and educational institutions. Furthermore, the study recommends the pivotal shift from

"general literacy" to "professional literacy" in ICT among English language teachers, emphasizing the foundational role of digital device proficiency for effective technology integration.



यस अध्ययनले अंग्रेजी भाषाका शिक्षकहरूको सूचना, सञ्चार र प्रविधि (ICT) सम्बन्धी ज्ञान, धारणा र अभ्यासको मूल्याङ्कन गरेको छ। यस अध्ययनको मुख्य उद्देश्य ICT मा शिक्षकहरूको दक्षता पत्ता लगाउने, यसको भूमिकाप्रति उनीहरूको धारणा बुझ्न र भाषा शिक्षणमा यसको प्रयोगको मूल्याङ्कन गर्नु रहेको छ। प्रयोगात्मक अनुसन्धानका लागि समानान्तर मिश्रित विधि अपनाइएको छ, जसले २२२ जना अंग्रेजी शिक्षकबाट मात्रात्मक तथ्याङ्क संकलन गर्न सर्वेक्षण प्रश्नावली प्रयोग गरेको छ। थप रूपमा, सुदूरपश्चिम प्रदेशका ६ जना शिक्षकहरूसँग अन्तर्वार्ता र कक्षाकोठा अवलोकनमार्फत गुणात्मक तथ्याङ्क संकलन गरिएको छ। अध्ययनले भौगोलिक रूपमा कैलाली, अछाम र बझाङलाई समेटेर विविध तथ्याङ्क संकलन प्रक्रियामा सहयोग पुर्याएको छ। सैद्धान्तिक रूपरेखा, प्राविधिक शिक्षण र सामग्री ज्ञानमा अंग्रेजी विदेशी भाषा (EFL-TPACK)को जटिल सम्बन्धको अन्वेषण गर्दै अध्ययनले शिक्षकहरूको हार्डवेयर प्रयोगमा मध्यम दक्षतास्तर देखाएको छ। यद्यपि कम्प्युटर र ट्याब्लेटजस्ता उपकरणमा शिक्षकहरूको परिचितता मध्यम छ, अन्तरक्रियात्मक सेतोपाटीको प्रयोगमा कमजोर दक्षता देखिएको छ। अध्ययनले शैक्षिक एपहरू, सफ्टवेयर र इन्टरनेट सर्फिड क्षमतामा शिक्षकहरूको ज्ञानको पनि मूल्याङ्कन गरेको छ, जसमा मध्यम दक्षता देखिएको छ। कोभिड-१९ महामारी जस्ता बाह्य कारकहरूले लचिलो र अनुकूल व्यावसायिक विकासका दृष्टिकोणको आवश्यकता देखाएका छन्। शिक्षकहरूले ICT लाई प्रेरणादायक उपकरणको रूपमा कक्षामा प्रभावकारी प्रयोगले विद्यार्थी संलग्नतालाई प्रोत्साहन गर्न महत्त्वपूर्ण भूमिका खेल्छ भन्ने सकारात्मक धारणा व्यक्त गरे। अध्ययनले ICT समावेशितालाई सुधार गर्न विस्तृत कार्यान्वयन योजनाको प्रस्ताव गरेको छ, जसमा मूल्याङ्कन, कोष, व्यावसायिक विकास कार्यक्रमहरू, सहयोग प्लेटफर्म र निरन्तर मूल्याङ्कन संयन्त्रहरू समावेश छन्। योजनाले विद्यार्थी-केन्द्रित वातावरणको प्रवर्द्धन, डिजिटल उपकरणको उपयुक्तता र शैक्षिक

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Kathmandu

प्रविधिहरूको अनुकूल नीतिगत समीक्षामा ध्यान केन्द्रित गरिएको छ। अन्ततः अध्ययनले अंग्रेजी भाषा शिक्षकहरूको ICT दक्षता सुधारका लागि महत्त्वपूर्ण सिफारिसहरू प्रस्तुत गर्दछ, जसले सामान्य साक्षरताबाट व्यावसायिक साक्षरतामा संक्रमणको आधारभूत भूमिका प्रदान गर्दछ।


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Declaration

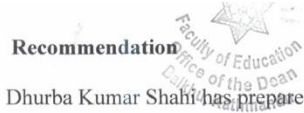


I hereby declare that, to the best of my knowledge, this dissertation entitled "Use of ICT in English Language Teaching: Teachers' Knowledge, Perceptions and Practices" is my own and original research work. This work has not previously been submitted to a candidate for any other degree.

I understand that my dissertation will become a part of the permanent collection of Tribhuvan University Library. By affixing my signature below, I consent to release my dissertation to any reader upon request.

Dharba Kumar Shahi

July 4, 2024 (2081-03-20 B.S.)



Recommendation

This is to certify that Mr. Dhurba Kumar Shahi has prepared and submitted his dissertation entitled "Use of ICT in English Language Teaching: Teachers' Knowledge, Perceptions and Practices" for the Doctor of Philosophy degree of Education in English Education. He has prepared his dissertation under my guidance and supervision. I recommend the dissertation to the Research Committee of the Faculty of Education, Tribhuvan University for further procedures of his PhD degree in English education.

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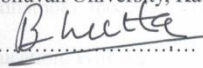
Approval




This dissertation entitled "Use of ICT in English Language Teaching: Teachers' Knowledge, Perceptions and Practices," presented by Mr. Dhurba Kumar Shahi for the PhD degree has been approved.


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Abbreviations

AR	: Augmented Reality
CAA	: Computer-Aided Assessment
CALL	: Computer-Assisted Language Learning
CBDT	: Computer-Based Diagnostic Test
CGAS	: Capital Gains Accounts Scheme
CLASS	: Computer Literacy and Studies in School
CLL	: Community Language Learning
CLT	: Communicative Language Teaching
COM	: Classroom Observation Measurement
DEO	: District Education Offices
DTP	: Desk Top Publishing
DVD	: Digital Versatile Disc
EDCU	: Education Development and Coordination Unit
ELT	: English Language Teaching
EMIS	: Educational Management Information System
ESCAP	: Economic and Social Commission for Asia And the Pacific
ESL	: English as a Second Language
ETA	: Electronic Transaction Act
FGD	: Focus group discussions
FIT	: Focus on Integrated Technology:
FSL	: English as a Foreign Language
HLCIT	: High-Level Commission for Information Technology
ICT	: Information and Communication Technology
INGOs	: International non-governmental organizations

IT	: Information Communication
IT	: Information Technology
LMS	: Learning Management Systems
MALL	: Mobile Assisted Language Learning
MoE	: Ministry of Education
MOU	: Memorandum of Understanding
NCF	: National Curriculum Framework
NGOs	: Non-Governmental Organizations
OLPC	: Laptop per Child
OLPC	: Laptop per Child
PC	: Personal Computer
PK	: Pedagogical Knowledge
PLATO	: Programmed Logic for Automated Teaching Operations
QAA	: Quality Assurance and Accreditation
SSRP	: School Sector Reform Plan
TAM	: Technology Acceptance Model
TEL	: Technology Enhanced Learning
TK	: Technology knowledge
TPACK	: Technological Pedagogical Content Knowledge
UNDP	: United Nations Development Program
UNESCO	: United Nations Educational, Scientific and Cultural Organization
VR	: Virtual Reality
VSAT	: Very Small Aperture Terminal

Chapter One

Introduction

The opening chapter of this dissertation provides a comprehensive background for the research. This chapter includes the contextualization of the study, background information regarding the integration of information and Communication Technologies in the English language classroom, the statement of the research problem, the rationale that supports the investigation, the study's objectives, research questions, and the delimitations that outline the scope of the study. Additionally, operational definitions are provided for key terms to confirm clarity and precision in the ensuing discourse.

Contextualizing the Study

The influence of information and Communication Technology (ICT) has become an inseparable part of modern life. The field of education has been deeply impacted by the widespread use of ICT (Kumar & Tammelin, 2008). The COVID-19 pandemic clarified that ICT is crucial for keeping things going, especially in education. Despite subjects like English language teaching traditionally depend on traditional methods; they have been compelled to acknowledge the role of ICT in language teaching as a transformative pedagogy (Chun et al., 2016).

The beginning of my journey as a teacher at Kalikeshwori Secondary School started with tools such as chalk, blackboards, and textbooks. A year later, the path led me to the doors of Shodasadevi Higher Secondary School in the heart of Achham district headquarters. Simultaneously, the opportunity to extend my reach into higher education presented itself at Achham Multiple Campus, where I stepped into the role of a part-time English language instructor at the bachelor level. Gradually, I became a full-time faculty and then Assistant Campus Chief of Achham Multiple Campus.

During this time, I got a laptop for my administrative tasks. However, I utilized it to get the content via online sources, e-teaching materials in PowerPoint presentations, and provide notes to the students. I had one fascination with ICT, which brought a turning point in my teaching life as a transformative shift in my pedagogical approach, i.e., teaching the English language via chalk and talk to smart technology (Aoki, 2010).

Regarding the sources of content (i.e., sufficient, latest, and authentic), their access to me, availability of self-learning materials, the ICT-supported teaching strategies (i.e., via PowerPoint presentations, YouTube, documentaries, etc.), and so on have transformed my classroom preparation, dissemination, and students' assessment/feedback. Moreover, the use of ICT in my classroom pedagogy has emphasized the development of my capabilities to improvise, adapt, innovate, and foster creativity rather than solely accumulating knowledge. (Khokhar & Javaid, 2016).

Moreover, this innovative pedagogy found significant realization when I was appointed co-coordinator of the Quality Assurance and Accreditation (QAA) committee on the campus. It made me work on my laptop to obtain information, prepare documents and present on or out of campus, which made me know the implications of ICT in multiple areas of our personal, social, and professional lives. In this way, I learned to use ICT in the pedagogical practices as I had been using it for administrative tasks. Gradually, my traditional boundaries of instruction have been transformed into ICT-based pedagogies. A newfound dimension of multimedia integration, incorporating audio, video, animation, simulation, and graphics, included my English language lessons and changed my pedagogical approach (Jorge et al., 2003).

This transformation was evident in my students' classroom performance and responses. Their enthusiasm in and outside the class resonated harmoniously with these modernized English language teaching approaches/methods, establishing a dynamic relationship between ICT-infused pedagogy and better comprehension (Clements & Sarama 2005; Harmer, 2007). Furthermore, using laptops, mobile phones, the internet, and social media such as Facebook, students have access to a digital portal to enhance their vocabulary acquisition and enjoy authentic English language usage and practice (Nankani & Olalvo, 2010). The merging of technology and pedagogy aligned my enthusiasm and the positive feedback from the students and interactive classroom experiences for both of us (Zinger et al., 2017). It has encouraged me to study this issue.

With such enthusiasm, I started to teach the English language to B.Ed. students using ICT. However, most English language teachers around this area needed to be more enthusiastic about using ICT in their classrooms, though it has multi-dimensional benefits. Yet, most of the projects and local governments around here supported and distributed the laptops to the teachers for effective teaching in their classrooms (Joshi et al., 2021; Rana, 2018). Most teachers were confined to using the laptops for personal use, such as social media, i.e., Facebook, or giving to their children. Perhaps their limited knowledge and practice, laziness towards using modern technology in their classroom, and confusion about their purpose of classroom teaching and preparing for examination might discourage them from using such devices and technology (Osborne & Hennessy, 2003). However, such scenes and events around me hurt and caused my interest in me to make an intensive study on it.

In addition, ICT is like a powerful tool that has taken over all aspects of our lives, making things work better and more efficiently (Lim & Tay, 2003). The

transformative impact of technology on communication, business, and community could not be overlooked. Even in the field of education, it has revolutionized the field of its materials, pedagogy, and assessment systems (Grabinger, 1996). English language teaching would not be an exception. Nowadays, English language teaching has been widely influenced and modified due to digital content and pedagogy (Nasrullah, 2022). It has become an additional important element in language teaching-learning activities. Such realization has led to changing all language teaching methods and techniques to teach language more effectively, impressively, and efficiently via digital devices and techniques (Jayanthi & Kumar, 2016; Ahmad, 2012). It is also one of the reasons why I am studying it.

In such context, my personal experiences and the universal impact of ICT it clear that ICT holds a key role and significance in every field. It ensures that input, processing, and output are handled effectively and efficiently across various fields (Anasri & Khan, 2020). Furthermore, it has been highlighted during the COVID-19 pandemic that encouraged people to work from their homes. Despite its much harm, it has made many teachers ICT-literate and encouraged them to use ICT in their teaching-learning activities. It would be continued even after COVID-19 as a pedagogical evolution and blended teaching/learning. It also bridged between the technological potential and instructional realities for effective teaching (Dawadi et al., 2020). In this situation, the significance of ICT is expected to increase even further in the upcoming days. It has also encouraged me to do this study.

These are some inspiring factors I have been highly motivated toward integrating ICT into English language teaching. Thus, I was interested in designing and conducting research to explore teachers' knowledge, perceptions, and practices in implementing ICTs in the English language teaching-learning (ELTL) classroom.

Background of the Study

In recent years, the advancement of technology has revolutionized the way education is delivered, and ICT has become an integral part of many classrooms worldwide. Technology integration in language teaching and learning is increasingly seen as a valuable approach to engage and motivate students, improve language proficiency, and prepare learners for the digital age. This modern approach to education has transformed the learning experience, fostering greater interaction between learners and teachers. Traditional methods relying on blackboards and textbooks have given way to interactive whiteboards and web-based platforms. Grabe and Grabe (2007) emphasize that ICT can play various instructional roles, making learners feel easier while learning and encouraging active engagement by applying technology to tasks instead of relying solely on direct instruction. Numerous websites offer opportunities for both teachers and learners to benefit them by creating materials, preparing lesson plans, and implementing effective strategies. Learners can enhance their listening, speaking, reading, and writing skills, especially in English as a Second Language (ESL) and English as Foreign Language (EFL) countries, where real exposure to English teaching and learning websites builds confidence and reduces intercultural tensions.

Kozma (2008) further supports the idea that ICTs contribute to economic growth and increased productivity by developing human capital. They also promote social development by facilitating knowledge sharing and greater participation while simultaneously fostering educational reform through extensive use of digital resources and changes in pedagogy. Over the past two decades, initiatives and projects related to ICT use in education have encouraged teachers to acquire the necessary knowledge and skills for effective implementation. Not only is ICT the foundation of the

information age, but it also serves as a crucial catalyst and tool for inducing educational reforms that transform students into productive knowledge workers (Pelgrum, 2001).

Information and Communication Technology (ICT) is a comprehensive term that encompasses the convergence of information technology (IT) and communication technology (CT) to facilitate the creation, processing, storage, management, and dissemination of information. In this regard, the United Nations Educational, Scientific and Cultural Organization (UNESCO, 2011) describes ICT as information technology and telecommunications to create, store, process, transmit, and exchange information. It includes many tools and technologies, such as computers, the internet, mobile phones, and digital cameras.

Similarly, the United Nations Development Program (UNDP, 2001) explicates ICT as diverse sets of goods, applications, and services for producing, storing, processing, distributing, and exchanging information from radio to wireless technology or the internet.

ICT is a broad term that includes telephony, broadcasting, computer, and internet technologies, facilitating access to information, storage, and sharing. These tools enable the creation, processing, transformation, and distribution of various forms of information, such as telephony, television, radio broadcasting, computer services, electronic media, and the relevant hardware and software components (Marcelle, 2000). While ICTs are often associated with advanced computer-based technologies, they include conventional technologies like broadcasting (radio and TV) and telephone technologies.

As ICT continues to develop, it plays a crucial role in shaping our modern world, impacting various aspects of society, including communication, education,

business, and governance. With the ongoing advancements and innovations, ICT will undoubtedly continue to transform the way we live, work, and interact with each other (Chun et al., 2018).

In the context of Nepal, the Information communication policy was first introduced (IT Policy 2000) in 2000. In 2004, the Government of Nepal established the High-Level Commission for Information Technology (HLCIT) to facilitate the development of ICT in the country by bridging the gap between the private and public sectors. The HLCIT played a significant role in boosting various ICT developments, including the IT Policy 2000, the proposed Amendment, the Electronic Transaction Act (ETA), and the formation of an IT Park.

In the field of education, the Interim Constitution of Nepal in 2007 recognized education as a fundamental right. The national plans on education also emphasized the importance of ICT. The School Sector Reform Plan (SSRP) from 2009 to 2015 aimed to ensure equal access to education and included strategies to incorporate ICT in teaching and learning processes. The Ministry of Education (MoE) presented various interventions to achieve the goal of compulsory education, where ICT played a crucial role.

ICT was introduced both as a subject and as an instructional tool throughout the education system in Nepal, as outlined in the National Curriculum Framework (NCF) of 2005. Despite the changes brought by ICT in the global context, its use in the educational system of Nepal is mostly limited to administrative purposes. A lack of skilled human resources and awareness leads to limited use of ICT in English language teaching and within classrooms. Although policies advocate for integrating ICT in teaching and learning activities to provide quality education, implementing these strategies remains uncertain. English language teaching is of particular interest

because English is widely recognized as a global language and a vital communication tool in various domains such as business, academia, and international relations.

Integrating ICT into ELTL classrooms can offer new possibilities for language instruction, such as interactive multimedia, online language resources, and language learning apps, virtual classrooms, and language exchange platforms.

ICT in English Language Teaching and Learning

ICT has become an essential aspect of our daily lives, including in education. Its use in education has recently garnered attention due to its significant potential to enhance language learning. ICT is now a prominent topic in the education sector, being implemented from preschool to university levels to benefit both students and teachers (Haleem et al., 2022). It serves as a powerful tool for educational change and reform, empowering educators and learners alike.

Computers are crucial in the learning process, particularly in English language education. As Hartoyo (2008) notes, while computers serve as both tools and mediums that facilitate language learning, their effectiveness hinges on their usage. ICT has advanced significantly in quality and efficiency, rapidly evolving with various products and applications. In this context, Clymer et al. (2020) elaborate that technology used in foreign language classrooms has been incorporated into applied linguistics and foreign language teaching. It has received its term, computer-assisted language learning (CALL). It includes learning through computers, mobile phones, electronic materials (authentic or commercial language learning materials), and/or social media websites or applications. CALL utilizes ICT in English language learning to enhance efficiency and effectiveness, leading to a better understanding and mastery of the language. Microsoft Word, PowerPoint, video player, YouTube, Zoom, PowerPoint, Google Classroom, WhatsApp, Microsoft Word, YouTube, and Google

Meet are the most applicable and used applications of CALL in ELT for offline and online classes (Abu Seileek & Abu Seileek, 2013).

In Nepal, after the studies of the use of ICT in classroom English language teaching, ICT has played a vital role in improving English language communication in schools (Adhikari, 2021 & Bhattarai, 2021). Thus, schools use ICT to facilitate English language teaching in the classroom, and different applications are used to enhance the learning experience and improve the quality of lessons (Acharya, 2014). With the ongoing development of technology and changing students' needs and performance, the use of English language class tends to be a more concise understanding of how theory, pedagogy, and technology are utilized in English language teaching and learning education for both settings of teaching-learning environments (Nasrullah, 2022).

Teachers' knowledge and competencies related to ICT are crucial for successful implementation. A lack of teacher knowledge in using ICT for educational purposes has been identified as a major barrier. However, focusing solely on technical competence is insufficient (Murithi & Yoo, 2021). According to the technological, pedagogical, and content knowledge (TPACK) theory in general and computer-assisted language learning (CALL) theory in English language teaching—EFL-TPACK as my theoretical framework—in the context of language teaching, teachers need a combination of technological, pedagogical, and content knowledge to use technology in teaching effectively (Alghamdi et al., 2018).

The TPACK theory suggests that teachers' knowledge of technology, pedagogy, and content intersect to facilitate student learning. This theory has been applied in developed Western nations to examine teachers' knowledge of educational technologies (Koehler & Mishra, 2016). However, its applicability to English teachers

in different cultural and economic environments, such as in Nepal, remains to be discovered.

Considering Nepal's substantial progress in implementing ICT in education, it is essential to examine teachers' understanding and application of ICT in classrooms, as well as the factors that may affect their practices. Furthermore, the compelling use of ICT has introduced ICT-assisted pedagogies such as computer-assisted language learning (CALL) in English language teaching and TPACK theory in general education. Such understanding assumes that teachers use ICT is related to their TPACK, and teachers with stronger TPACK will be more successful in implementing ICT in their classrooms. The effectiveness of ICT implementation is evaluated through the lens of TPACK theory, which posits that teachers with a higher level of TPACK will use ICT more effectively in their classrooms (Koehler & Mishra, 2016). TPACK-EFL for the Improvement of the English Teacher is essential for English language teaching (Syawallina, & Suganda, 2023). Having realized the compelling need for ICT in the field of English language teaching, I have preferred English as a foreign language in TPACK i.e. EFL-TPACK as my theoretical framework for this study.

In English Language Teaching (ELT), various types of technology and e-devices, such as the internet, computers, and social media platforms like Facebook, are applied to assist language teachers and learners. ICT helps make language learning more effective and provides insights into different ELT methods (Ahmad, 2012). However, challenges such as the lack of accessibility and usability of ICT remain in the ELT classroom in Nepal.

This study concentrates on the integration of ICT in secondary English language classrooms in Nepal. It examines teachers' knowledge, perceptions, and

practices regarding the use of ICT in English language teaching and aims to derive some potential conclusions. The investigation is vital to understand better the status of ICT implementation among English teachers in Nepal and its impact on language learning.

Statement of the Problem

The integration of ICTs and digital resources in education has become increasingly widespread, offering numerous tools such as MOODLE (Modular Object -Oriented Dynamic Learning Environment), LMS (Learning Management System), Zoom, Google Meet, and Microsoft Teams to support teaching and learning activities (Tkachuk et al., 2020). The 21st-century classroom places a significant emphasis on the use of technology in instructional activities across various subjects (Wilcox et al., 2017). This research focuses specifically on the use of ICT in ELT classroom contexts.

Previous studies (Ansari & Khan, 2020; Kazoka & William, 2016; Paudel, 2020; Srivastava, 2016) have demonstrated that the use of ICT in instructional activities enhances both learner performance and teacher skills and knowledge. In this regard, ICT integration aids teachers in adapting to new instructional policies and practices promotes student-centered approaches, and supports self-learning and motivation. Despite these advantages, there are notable challenges in the use of ICT or practices, particularly in regions with limited access to digital resources.

The academic performance of school students in English is comparatively poor, particularly in the Sudurpashchim and Karnali provinces (ERO, 2019). Limited access to digital resources further complicates this issue. This study aims to investigate how ELT teachers in Sudurpashchim province perceive and use ICT in

their instructional activities in English language classrooms and to evaluate their access to digital resources.

Several studies (Al Khateeb, 2017; Ansari & Khan, 2020; Kasemsap, 2018; Kumari & D'Souza, 2016; UNESCO, 2023) have shown that high levels of ICT knowledge and competency among teachers are crucial for effective classroom practices, and the Government of Nepal has emphasized the importance of ICT skills for teachers through various frameworks and policies like ICT in Education Master Plan 2013-2017, School Sector Reform Plan (SSRP) 2009-2013 (MoE, 2009), School Sector Development Plan (SSDP) 2017-2023, School Education Sector Plan (SESP) 2022-2032. They have also focused on the use of ICT in every classroom. This study aims to evaluate the ICT knowledge of English language teachers and its application in ELT classrooms in the Achham, Kailali, and Bajhang districts of Sudurpashchim province.

Furthermore, positive attitudes toward digital resources are essential for their effective use (Shah, 2022). Teachers need to be knowledgeable about these resources to integrate them into their professional development and teaching practices (Cox & Marshall, 2007; Zhao & Frank, 2003). This study also measures the perceptions of English language teachers toward the use of ICT in their classrooms. The integration of ICT in English Language Teaching (ELT) has gained prominence globally, yet its adoption and effectiveness vary widely depending on teachers' perceptions and practices. While teachers' knowledge of ICT is a critical factor, their attitudes and actual use of these technologies in the classroom are equally significant in determining the successful of ICT integration .

The attitudes and perceptions of English language teachers towards ICT play a crucial role in its effective implementation. Positive perceptions are associated with

higher motivation to use digital tools and resources in teaching, which can lead to improved teaching and learning outcomes (Shah, 2022). However, several studies have highlighted mixed perceptions among teachers in Nepal. For instance, research by Thapa (2015) found that while some teachers recognize the potential benefits of ICT, others are skeptical about its relevance and practicality in their teaching contexts. Factors influencing these perceptions include prior experience with technology, training received, and the perceived ease of use and usefulness of ICT tools (Paudel, 2020).

Despite various initiatives by the Nepalese government to promote ICT in education, such as the ICT in Education Master Plan (2013/17) and the School Sector Development Plan (SSDP) 2017-2023, there remains a gap between policy and practices. Many teachers still perceive significant barriers, including inadequate infrastructure, lack of technical support, and limited professional development opportunities (UNESCO, 2023).

The practical application of ICT in ELT classrooms in Nepal varies significantly, with many teachers struggling to integrate technology effectively into their teaching practices. According to Ansari and Khan (2020), while ICT tools like LMS, Zoom, and Google Meet have the potential to enhance instructional activities, their use is often limited by external constraints such as poor internet connectivity, insufficient access to digital devices, and lack of institutional support. These challenges are particularly pronounced in rural and remote areas, such as the Achham, Kailali, and Bajhang districts of Sudurpashchim province, where infrastructural deficits are more acute (ERO, 2019).

Furthermore, the actual use of ICT in classrooms often reflects traditional teaching practices rather than innovative, student-centered approaches. Teachers may

use technology for administrative tasks or presentation purposes but fall short of leveraging its full potential for interactive and engaging learning experiences (Kazoka & William, 2016). This discrepancy between the availability of ICT resources and their effective use suggests a need for ongoing professional development and support to help teachers integrate these tools meaningfully into their pedagogy.

In this local and global context, this study aims to bridge the gap between knowledge, perceptions, and practices of ICT in ELT by examining the experiences of English language teachers in the Sudurpashchim province of Nepal. It explores how teachers perceive the role of ICT in their teaching, the extent to which they integrate digital tools into their instructional activities, and the challenges they face in doing so. Furthermore, having viewed the access to digital resources and the geographical location of schools which play significant roles in ICT integration (Alemu, 2015; Saleminik et al., 2017), this study identifies gaps in knowledge, perception, and practices among secondary level English language teachers in the Mountain (Bajhang), Hill (Achham), and Tarai (Kailali) districts of Sudurpashchim province. By evaluating these aspects, the research seeks to provide insights into the effectiveness of current ICT policies and identify areas for improvement to enhance the quality of English language education in Nepal.

Rationale of the Study

In the modern era, the rapid development of ICT has fundamentally reformed our lives in every aspect. It has more explicitly transformed our personal lives along with education, particularly in the teaching of the English language. ICT has emerged as a central force for change worldwide, revolutionizing how languages are taught and learned. The integration of ICT into English language teaching has led to effective teaching methods, motivated students, and enhanced language proficiency through

diverse and authentic sources, digital content, and virtual teaching (Hanson-Smith, 2001). This shift in English teaching methods has redefined the experiences of both teachers and learners. Traditional tools such as chalkboards and textbooks have replaced interactive whiteboards and web-based platforms.

Similarly, online resources have replaced printed materials. This shift has provided English language learners with more varied texts and virtual classrooms, expanding their exposure and learning opportunities. The conventional teaching method seems less effective in today's ICT-based society.

As Grabe and Grabe (2007) highlight the diverse capabilities of ICT in education, my study has also explored its various dimensions in secondary-level English language classrooms. With this, the respective teachers, students, and other stakeholders would benefit equally. The study's significance extends beyond classrooms, impacting policy formulation, curriculum design, and individual learners. It contributes empirical insights for informed decision-making to enhance ICT's impact on English language instruction. Moreover, it serves as a foundation for further education research and offers valuable insights to media practitioners engaged in educational reporting.

In conclusion, this study examines the transformational (reporting the research now) potential of ICT integration in English language teaching, shedding light on patterns, attitudes, and practices that shape language education. The outcomes of this study contribute not only to the discourse on education in the digital era but also to the improvement of English language education in Nepal.

Purpose of the Study

The propose of the study is to uncover the secondary level English language teachers' knowledge of ICT, their perceptions towards the use of ICT, and their

classroom practice of ICT in the Achham, Kailali and Bajhang districts of Sudurpaschhim Province. Thus, this study attempts to identify the level of knowledge of ICT, find out the perceptions toward use of ICT in the teaching and learning process, and explore the practices of ICT in the ELT classroom pedagogy

Research Questions

To achieve the purpose of this study, the following questions were used:

1. To what extent do secondary-level English language teachers possess a working knowledge of ICT, including their familiarity with technological tools and concepts?
2. How do English language teachers perceive the integration of ICT in teaching and learning?
3. What are the benefits and challenges associated with using ICT in English language teaching as experienced by secondary-level teachers?
4. How do English language teachers use ICT in ELT classroom practices?

Delimitations of the Study

The study was confined to six secondary-level English language teachers from six community schools for qualitative study and 222 secondary-level English language teachers from community schools for quantitative study from three districts viz. Achham, Bajhang and Kailali of Sudurpaschim province of Nepal.

For methodological choices, the study adopted a convergent mixed methods approach using a questionnaire (for 222 respondents), semi-structured interviews and class observations of six participants to collect information related to the English language teachers' knowledge of ICT and digital literacy, perceptions towards the use of ICT in their English language classrooms and their classroom practices.

The data for quantitative research design was collected via online/google form and the information for qualitative research design was collected via semi-structured interviews and class observation. Another delimitation of the study was that the level of knowledge of ICT by the English language teachers was assessed through a self-reported or self-assessment approach.

Operational Definitions of Key Terms

In this study, several key terms that might carry their own specific and contextual meanings in this study were employed. These terms are given as follows:

Collaborative Learning. Collaborative learning denotes an instructional approach where students actively participate with their peers or in groups to acquire ideas and knowledge. It involves cooperative teamwork and the exchange of ideas, fostering a shared learning experience that promotes collective knowledge acquisition.

E-learning/Education. E-learning or electronic learning includes a mode of learning that connects digital or electronic information in the process of teaching and learning. It is different from the traditional classroom setting and can occur anywhere, facilitated by internet-based environments.

ICT-based Instruction. ICT-based instruction refers to an educational method that attaches the potential of ICT to enhance and facilitate the teaching and learning process. It involves using technological tools to improve educational interactions. They include online learning platforms, virtual classrooms, educational apps, interactive whiteboards, e-books, digital texts, podcasts, audio resources, online assessments and quizzes, etc.

ICT Apps and Software. ICT apps, software applications, and computer programmes refer to the tools used for English language teaching and learning scenarios. These tools facilitate digitalized language instruction. Examples such as;

ClassDojo, Padlet, Seesaw Grammarly, Quillionz, etc.

ICT Apps and Software. ICT apps, software applications, and computer programmes refer to the tools used for English language teaching and learning scenarios. These tools facilitate digitalized language instruction. Examples such as; ClassDojo, Padlet, Seesaw Grammarly, Quillionz, etc.

ICT Devices. ICT devices are hardware tools and equipment that use technology to process, transmit, and receive information. These devices play a crucial role in communication, information storage, and data processing. They include hardware tools such as computers, laptops, and similar instruments employed in English language teaching and learning.

ICT Infrastructures. ICT infrastructure refers to the essential components required for the effective implementation of ICT-based instruction. This includes computers, tools such as whiteboards, and a reliable internet connection. The availability and quality of ICT infrastructure are often the primary barriers to teachers' use of ICT for teaching and e-learning.

ICT Knowledge: ICT knowledge represents self-reported and reflected knowledge or digital literacy of English teachers towards the use of ICT.

Language Skills: Language skills include the abilities needed to convey thoughts, emotions, and ideas. The fundamental language skills include listening, speaking, reading, and writing.

Outline of the Dissertation

This dissertation has been divided into eight chapters, each serving a specific purpose. Chapter one introduces the research and its significance. It lays out the research questions to be answered, the reasons behind the study, and the boundaries to work within. Chapter two describes the previous research, exploring what other

people have studied about using technology in English teaching. It also builds a framework to guide the research. Chapter three explains the research methods—how information was collected, who was involved, and the ethical considerations.

The next three chapters (Chapters Four, Five, and Six) each deal with different aspects of the research questions. Chapter four examines the English teachers' understanding of technology, like computers and educational apps. Chapter five explores these teachers' perceptions regarding the use of technology, such as motivating, helpful for their learning, and good for their professional growth. Chapter six examines these teachers' actual use of technology, such as computers, apps, or online resources, in their English classrooms. Chapter seven brings everything together and discusses the findings of the study, dialoguing with the related literature and theoretical framework. It also mentions the limitations of the research. Finally, chapter eight wraps everything up, providing the answers to the research questions based on the findings and discussions. It also provides insight for English language teachers to use ICT in their classrooms for further research in the future.

Chapter Summary

The opening chapter of this dissertation provides a comprehensive background for the research by contextualizing the study within the educational landscape and emphasizing the growing relevance of Information and Communication Technologies (ICT) in enhancing English language teaching. It offers detailed background information on the historical development and current trends in ICT integration in English language classrooms, articulating the research problem by identifying specific challenges and gaps in existing knowledge and practices. The rationale for the investigation underscores the significance of exploring ICT's impact on teaching practices and student outcomes, highlighting potential benefits and transformative

effects. Additionally, the chapter outlines the study's objectives and research questions, defining the scope through delimitations and ensuring clarity with operational definitions of key terms. This foundational chapter sets the stage for the subsequent sections, framing the study's purpose and direction and preparing the reader for an in-depth exploration of the research topic.

Chapter Two

Review of the related literature and Conceptual Framework

This chapter reviews the conceptual, theoretical, and empirical literature related to the integration of ICT in English language teaching. It examines the conceptualization of ICT, investigates teachers' perceptions and practices regarding their use, and surveys relevant empirical studies. The study's implications for further exploration are highlighted by identifying gaps in existing research. A clear conceptual framework is also constructed, incorporating insights from the literature review to guide the investigation into teachers' knowledge, perceptions, and practices of ICT in English language teaching. This comprehensive review establishes a foundation for the following research chapters and highlights the study's significance in the educational and technological landscape.

Conceptualizing the ICT

ICT refers to the broad range of technologies that facilitate storing, retrieving, manipulating, transmitting, and exchanging information and data. These technologies encompass various Hardware Usage and software components, networking systems, and other tools that enable individuals and organizations to access, create, and share information efficiently. In this regard, Srivastava (2016) describes ICT, in the last decade, there has been a remarkable change in the adaptation of ICT. That change has deeply impacted our society and the way we go about our daily routines. The integration of ICT has brought substantial changes within our society, reshaping not only the technical aspects but also fundamental structural elements.

Nearly all spheres of life recognize the importance of comprehending the basic concept of ICT and acquiring basic skills as an integral component of personal, social, and professional life. Similarly, Alkamel and Chouthaiwale (2018) view ICT as

information and communication technology that includes many different technologies that help with sharing and managing information electronically. According to them, ICT refers to physical objects such as radios, TVs, videos, DVDs, phones, satellites, personal computers, laptops, smartphones, tablets, printers, scanners, fax machines, routers, modems, cables, network adapters, and software services such as video calls, e-mails, and blogs. Thus, ICT is all about how we use electronic devices to communicate and handle information.

Similarly, Jayanthi and Kumar (2016) explain the beneficial effects of ICT on ELT across various aspects, such as getting authentic and varied resources, motivating the students, adopting learner autonomy, supporting the teachers, conducting student-centered activities, and self-assessment. Authentic resources can be sufficiently obtained through images, animations, audio, and video clips, which greatly aid in language presentation and practice. Furthermore, ICT helps store and share information among individuals through computers and computer networks (Economic and Social Commission for Asia and the Pacific [ESCAP], 2001). The three basic components of ICT are information, communication, and technology. Information refers to messages or knowledge transmitted through a channel from a sender to a receiver. Similarly, communication involves the exchange of messages and information between/among individuals or groups. In the same way, technology refers to a system of tools, machines, or techniques used to make tasks more efficient and effective.

Chapman and Slaymaker (2002) discuss the combination of technology devices (i.e., personal computers) and communication technologies like telephones and their associated telecommunication networks. According to UNESCO (2002), ICT has brought a vibrant transformation in contemporary society and widely

influenced storing, accessing, controlling, and distributing information. Moreover, Paneru (2023) describes information and communication technology (i.e., electronic communication, information management) as twenty-first-century skills and soft skills, the most popular concept in vocational training.

Historically, Paudel (2020) offers the evolution of ICT and its profound impact on communication, information sharing, and various activities. The journey begins with the ancient Abacus, an early mechanical device for calculations and information exchange using numbers, invented around 2000 BC by the Sumerians and Egyptians. Advancing through time, Blaise Pascal's mechanical calculator in 1642 marked a significant milestone in automating mathematical computations. Similarly, Charles Babbage's work on the Analytical Engine in 1822 laid the groundwork for modern computing, even though the device was not fully constructed during his lifetime. Furthermore, innovation continued with Guglielmo Marconi's invention of the radio, revolutionizing long-distance communication through wireless signal transmission. Similarly, Philo Farnsworth's creation of television brought visual broadcasting to households, transforming media and entertainment. Martin Cooper conceived of the first portable cellular telephone handset in 1973 and led the team that developed and introduced it. He is known as the “father of the handheld cellular phone. The influence of mobile phones on society has been largely positive, despite some negative aspects. Exploring various strategies has addressed the challenges of mobile technology, such as new radio technologies and specialized devices designed for medical, educational, or Internet of Things applications. It is predicted that in the next two to three generations, mobile phone usage will experience significant advancements, particularly in healthcare, education, industry, daily life, learning, and collaborations, leading to more effective, productive, and creative outcomes (Harris &

Cooper, 2019). The introduction of the mobile phone in 1946 by Bell initiated the era of mobile communication.

As technology progressed, the first email was sent in 1971, which started the era of computer technology, and brought significant changes to information communication. During the late 1950s to 1970s, researchers and scientists at the Advanced Research Projects Agency in the United States established the Internet, which gave hope for a revolutionary enhancement in global communication and information sharing. Tim Berners-Lee's invention of the World Wide Web in 1991 provided a user-friendly interface for faster and more accessible internet access, transforming how people access information. Moreover, the advent of the internet facilitated the rise of electronic commerce in the mid-1990s, revolutionizing business operations and enabling online transactions. These developments collectively demonstrate the fascinating journey of ICT for modern society.

Similarly, Sure (2016) describes five phases of ICT evolution, starting from the creation of early computers and calculators based on electromagnetic technology in the 1940s, continuing to the development of personal computers and integrated chip technology during the 1970s, making computing more accessible and efficient; the advent of microprocessors in the 1980s, which reduced the cost of processing power and made computers more efficient; the worldwide connection of computers through the Internet, breaking geographical barriers and creating a global village in 1990s; and the more recent phase involves the development of wireless technology and satellite phones, leading to increased portability and processing speed of ICT devices.

With the continuous advancement of ICTs, their influence has spread rapidly, leading to the era of e-business, e-governance, e-banking, e-education, e-learning, and

other electronic activities. These technologies have not only improved communication but also reformed various aspects of modern life, connecting people across the globe and shaping how societies live their daily lives. While the existing literature offers a wealth of information, this research critically reflects on this study, emphasizing its implications for practical application. By addressing gaps in teacher knowledge and training, analyzing factors shaping perceptions and attitudes, and proposing solutions to implementation challenges, the study contributes to developing more effective, inclusive, and future-ready educational practices

ICT in Education

ICT is the modern technology for storing, manipulating, and disseminating information that has brought a revolutionary movement in education, information, and communication. In this context, education has been highly influenced by the use of ICTs since they demand the wide use of information and communication in its process and product. According to Puustinen and Rouet's (2009) study, ICTs are commonly used to facilitate constructivists' problem-based learning approaches in educational settings. Furthermore, they argue that ICT plays a vital role in teaching and learning, not only in designing, storing, retrieving, and sharing information but also in fostering communication between/among students, instructors, and other learning collaborators. Furthermore, Aoki (2010) viewed ICT as transforming traditional education (t-education) into electronic education (e-education). By overcoming the constraints of time and space, ICT has revolutionized the transfer of information and knowledge, benefitting from the rapid advancements in technology (Fitzpatrick, 2004). It has also opened the door for an open education system, where learning opportunities extend beyond the boundaries of schools or universities.

Regarding the integration of ICT in education, Ghavifekr et al. (2014) emphasize two primary dimensions of its benefits. Firstly, ICT improves access to information, allowing for the shaping and generation of new knowledge. Secondly, they facilitate communication and foster teamwork and collaboration among learners. These factors contribute to the effective utilization of ICT in the educational context.

In the context of technology's role in foreign language education, Kumar and Tammelin (2008) identify three significant advantages of ICT in teaching and learning a foreign language: (i) offering authentic language learning resources and contexts, (ii) creating a cooperative and collaborative environment, and (iii) providing opportunities for effective teaching and learning. Likewise, Angelina and Jimoyiannis (2012) emphasize that ICT can transform the learning environment by creating numerous opportunities in the field of education, such as accessing information and learning resources, collaborating in learning, and focusing on self-directed lifelong learning. It also significantly contributed to improving access to information in education through various communication and information-sharing channels (Anasri & Khan, 2020). The convenience and flexibility of ICT have played a crucial role in providing easy access to learning resources, empowering learners to engage in education anytime and anywhere (dela Pena-Bandalaria, 2007).

Learners adopt adequate ICT tools, such as e-mails, YouTube, Facebook, blogs, wikis, and various other learning management system platforms to access and share information and learning materials such as e-books, e-periodicals, articles, videos, and slides (Sarwar et al., 2019). Such e-materials and practices help the learners reduce reliance solely on teachers.

Similarly, Madhabi et al. (2023) describe that ICT fosters interaction between teachers and students, offers easily understandable input and output, aids in the

development of critical thinking skills in students, and more students–centric learning, encourages students' autonomy and builds their self-confidence and boosts their motivation. Additionally, the interactive multiple tools allow learners to practice pronunciation in an environment free from embarrassment and fear of making mistakes.

In addition, the virtual teachers available in ICT platforms enable learners to choose from various ideas, analyses, and interpretations on various subjects. Moreover, ICT has democratized information accessible to everyone and everywhere by granting freedom to learners to manage their learning time according to their individual needs and contexts. It also played a crucial role in facilitating collaborative learning. Katz et al. (2004) describe collaboration as the cooperative effort of learners to generate new scientific knowledge. With the support of the Internet, ICT has unlocked numerous possibilities for interaction and collaboration in educational settings (Nechita & Timofti, 2011) through various technologies, such as e-mails, blogs, wikis, Facebook, Skype, as well as both synchronous and asynchronous computer-mediated communication (Piki, 2008). These ICT tools and platforms offer multiple opportunities for knowledge sharing and group work, fostering e-collaboration among learners and removing the barriers of time, location, and resources.

However, it plays a pivotal role in fostering self-directed lifelong learning by creating student-centered learning environments that enhance the quality of education and increase learner motivation and engagement (Jimoyiannis & Angelina, 2012). Their multimedia capabilities, combining visual images with text, sound, color, and animation, not only capture learners' attention but also aid in comprehending abstract concepts, encouraging self-directed learning. Within this framework, Jimoyiannis &

Angelina (2012) assert that ICT applications have established e-learning environments in numerous contemporary educational institutions, fostering learning communities among teachers and students. In the knowledge society of the 21st century, ICT has made lifelong learning more effective, spanning formal, informal, and non-formal education (Drigas & Tsolaki, 2015). They have transformed learning spaces, blurring the boundaries between school and home, as modern individuals are constantly surrounded by technologies such as radio, TV, mobile phones, the Internet, and computers throughout their daily lives (Beyene & Zerai, 2014).

Efforts to enhance the efficiency and effectiveness of formal and informal education at all levels have led to an increased focus on utilizing computers and the Internet (UNDP, 2001). Digital literacy, virtual learning, and distance education have become popular trends in modern societies (Choeda et al., 2016). Thus, there is a pressing need for ICT infrastructure development and stakeholder awareness to effectively utilize such technologies and promote interactive, collaborative, and knowledge-constructive teaching and learning.

As mentioned, the literature demonstrates a substantial accumulation of knowledge, but it lacks critical reflection and analysis. This analysis shows deeper into the implications of existing studies for this research, emphasizing the importance of engaging beyond mere summaries.

ICT-Based Teaching-Learning Tools

ICT tools and devices, such as computers, interactive whiteboards, laptops, and mobile phones, are used in teaching and learning. They aid teachers in presenting lessons effectively and enhance English language teaching. These tools benefit teachers and learners, making the language-learning process more efficient and engaging. ICT has become an indispensable part of our daily lives, and the ELT

process has embraced it to create a real learning environment and provide multiple exposures to language content. ICT tools encompass various devices and e-resources, including the Internet, YouTube, e-books, and blogs. Teaching-learning tools like interactive whiteboards and computers are commonly preferred for educational activities. Lim and Tay (2003) classified ICT tools into informative, registration, constructive, communicative, and collaborative, all playing essential roles in effective ELT. Some of the most common ICT tools used in teaching and learning English have been discussed below.

Computer. The computer is a significant technological device capable of running various programs. According to Herring (2010), it operates under the control of instructions stored in its memory. It can accept input data, process it following specified rules, generate output, and store results for future use. This makes the computer a versatile ICT-based tool that performs most of its processing internally through its central processing unit (CPU). Additionally, computers can be connected to multimedia projectors to facilitate effective class presentations. They enable various activities, including word processing, sending emails, creating lessons and tasks, playing videos, downloading learning resources, and using tools like Google Docs and wikis.

Furthermore, computers play a pivotal role in language learning, offering access to (English) language learning software, online courses, and interactive multimedia content (Chapelle, 2001). In addition, the use of computers in language teaching has been explicitly discussed in the computer-assisted language learning programmes that provide individualized instruction, catering to learners' needs (Levy & Stockwell, 2006). In this sense, computers are widely used in the English language classroom for lesson preparation and presentation as well as assessment/feedback.

Mobile Phone. Mobile phones have become one of the most popular ICT tools in recent years. Mobile devices are digital, easily portable, and internet-accessible devices like smartphones. Tablet computers have become integral to daily life, offering diverging educational opportunities (Nankani & Olalvo, 2010). However, using devices in the educational setting, particularly in the school classroom, has sparked debates (Thomas & Muñoz, 2016). Despite their potential, schools often prohibit mobile device use within the classroom and school (Beland & Murphy, 2015). Mobile Assisted Language Learning (MALL) refers to enhanced language learning using mobile devices. These devices offer unique educational advantages, which include portability, connectivity, the ability to change data and collaborate, context sensitivity, individuality, enabling multiple modalities, supporting student improvisation as needed within the context of learning, and supporting learning on the move (Klopfer et al., 2002; Liu et al., 2020).

Mobile devices hold promise in English as a Foreign Language (EFL) learning and teaching by providing access to up-to-date materials in language use (Godwin-Jones, 2018). Technology can transform the language classroom, making English learning activities personalized, more interactive, and more accessible. However, the effectiveness of integrating technology will depend on the learning activities that students encounter (Pheeraphan, 2013). Technology can aid the learning of EFL grammar. Technology can aid in learning EFL grammar. The highest reading proficiency is achieved by students who use online dictionaries (Dwaik, 2015). Moreover, digital devices have emerged, with students having greater access to technology than schools (Thomas & Muñoz, 2016). Therefore, mobile phones have become integral tools in education, despite debates and restrictions in their classroom. They personalize and enrich learning experiences, especially in grammar and

language proficiency. The potential mobile devices bridged the educational gap and highlighted their accessibility compared to traditional resources, underscoring their importance in modern education.

Mobile phones in English language teaching enable ubiquitous access to language learning apps, podcasts, and online resources, facilitating learning anytime, anywhere (Kukulska-Hulme & Shield, 2008). Furthermore, with mobile phones in English language teaching, a new concept, i.e., mobile-assisted language learning (MALL) has emerged. It enhances language acquisition through personalized and interactive experiences (Stockwell, 2010).

Tablets. Conversely, tablets combine the features of laptops and mobile phones, providing a versatile and cost-effective option for English language teachers and learners. With a size between laptops and mobile phones, tablets can be used as mini-notebooks or guidebooks for educational purposes. Like computers and mobile phones, tablets offer a portable and interactive platform for English language learning apps, e-books, and multimedia content, enhancing engagement and motivation (Burston, 2014).

Digital Recorders. Digital recorders are useful devices for capturing ongoing classroom activities and enhancing learners' listening and speaking proficiency by allowing them to listen to English language materials repeatedly. In ELT, digital recording tools help learners practice pronunciation and speaking skills. Teachers can provide feedback on recorded assignments, promoting self-assessment (Stockwell, 2010).

Television. Television may be considered old-fashioned in today's technological landscape, but it can still be used effectively for teaching and learning. Televisions offer a combination of sound, image, motion, and content, making them

suitable for watching various programmes, including news, tele-serial, and educational documentaries. Additionally, modern televisions with internet connectivity can function like desktop computers, offering access to various educational content. In ELT, television can be utilized for educational purposes and educational television programmes and documentaries contribute to English language development by exposing learners to authentic language use (Liu & Tay, 2003).

Radio. Radio is the most easily available and affordable audio tool that can be used to listen to various programmes. It can be utilized for listening-speaking comprehension of English language teaching-learning. It can be on air for 24 hours at little cost to the users. It can be utilized in educational programmes such as distance learning, English language for authentic listening speaking, and many more.

Interactive Whiteboard (IWB). The interactive whiteboard is a modern display device. The IWB is an electronic screen linked to a computer, especially used in teaching-learning to present ideas and information. It helps the teachers to structure their lessons and enables ICT use to be more integrated into the classroom. It helps text and images to be moved around the board. It also allows work to be saved for next time. It can also create interest and provide a chance to learn by doing. So, this is one of the useful teaching-learning tools. In ELT, Interactive whiteboards enhance classroom interactivity, allowing teachers to incorporate multimedia content and engage students in collaborative learning (Cutrim Schmid & Whyte, 2012).

Internet. The Internet is a vast computer network that offers diverse information and communication facilities, making it an essential resource for searching, creating, and sharing knowledge. Teachers can use the Internet to explore various websites and software programmes to enhance their teaching techniques and professional development. Online platforms enable teachers to collaborate, share

solutions, and discuss new approaches through email, video conferencing, and group chat. The Internet serves multiple purposes, including information gathering, communication, social networking, file transfer, entertainment, online transactions, marketing, and online education. Its widespread use demonstrates that today's human activities heavily rely on the Internet (Glava & Glava, 2012). In the context of ELT, the internet provides access to vast resources, including authentic materials, language exchange platforms, and online courses, fostering autonomous learning (Godwin-Jones, 2018).

Email. Email is the emergence of the Internet, which refers to the electronic mail system for transferring messages from one computer to another computer through Internet access. It is useful in English language teaching for sharing learning materials and safely sharing ideas. According to Sharndama (2013), teachers can use email to send learning materials to students give assignments, assess, and post feedback to the students' email boxes. Therefore, Email is useful for effective teaching and learning processes. Regarding ELT, email facilitates written communication, offering opportunities for language practice, collaboration, and feedback outside the classroom (Warschauer & Healey, 1998).

YouTube. YouTube is a video-sharing service that allows users to watch videos posted by other users, and if interested in uploading videos, it provides a chance. Several YouTube channels upload videos related to English language teaching, especially teaching techniques, problem solutions, digital materials, etc. These ELT-related videos teachers and learners can benefit from educational videos that can be used for motivating, brainstorming, or providing different subject matters. For ELT, YouTube offers a rich source of authentic listening materials, educational

channels, and language tutorials, supporting diverse learning styles (Thorne et al., 2009).

E-books. An e-book is an electronic copy or soft copy of the book. The users have to pay some money to read an e-book. Interested persons can read e-book software and e-book readers and store their mobile phones, computers, or laptops. It has many advantages in terms of pedagogical implications. In ELT, e-books provide a portable and customizable reading experience, allowing learners to access a wide range of texts and interactive features (Boggs, 2012).

Blog. A blog is like a journal/diary or article that is found on the internet. It is the personal writing of the blogger where the personal feeling is shared. It allows the texts, images, or link posts and leaves comments. Interactively autonomous learning can be enhanced by the blog, and it can be used in the English language classroom as a learning resource. It is helpful for English teaching-learning activities. It encourages learners to create blogs from the website and share their ideas or feelings. Regarding ELT classes, language learning blogs offer authentic written content and opportunities for interaction, fostering reading and writing skills (Thorne & Payne, 2005).

PowerPoint. PowerPoint is also known as a presentation tool that is used to present our materials or ideas. PowerPoint is supposed to be a powerful presentation software that was developed by Microsoft, which facilitates users to create anything from basic slide shows to complex presentations. It uses slides to convey information rich in multimedia. It can be used for educational or informal purposes. Furthermore, PowerPoint presentations in ELT aid in visualizing language concepts, grammar rules, and vocabulary, enhancing comprehension and retention (Hashemi et al., 2012).

Facebook, Twitter and Skype. Popular social media platforms can be used by teachers to connect with learners, share information, and foster a learning

community for discussion and feedback. Social media platforms such as Facebook, Twitter, and Skype can be widely used and practiced in English language classes. They provide opportunities for language practice, interaction with native speakers, and access to authentic language use (Lomicka & Lord, 2012). Furthermore, skype enables video calling, messaging, and file sharing, allowing learners to practice speaking skills and explore cultural aspects of the language.

Wikipedia. A platform for collaborative project work and research, encouraging students to engage with content actively. In ELT, Wikipedia offers a collaborative platform for research, promoting information literacy and critical thinking skills in language learners (Callis et al., 2009).

Google Docs. Facilitates collaborative writing activities and resource sharing among learners. Regarding ELT, Collaborative writing tools like Google Docs facilitate real-time collaboration, peer editing, and feedback, promoting writing skills (Reinhardt & Zander, 2011).

LMS Platforms. MOODLE, Blackboard, Quizbean, Showbie, Socrative, Go Formative, and Second Life provide web-based tools for administering and distributing e-learning courses, promoting effective language skills learning.

Similar descriptions have been made by various scholars. Kennewell (2013), for example, has broadly classified ICT tools into four types. They can be discussed as follows.

Hardware Usage. This category includes physical entities or devices used in information and communication technology. Examples of ICT Hardware Usage include desktop (Personal Computer), Laptop PC (Notebook Computer), Mobile phone (Smartphone), digital camera, personal data assistant (PDA), calculator, D-ROM (Compact Disc-Read Only Memory), Database (Storage and retrieval system

for information), Interactive whiteboard (Used for interactive presentations and teaching) and Spreadsheet (Software application used for data analysis and calculations).

Software. These are the stored instructions and programmes that enable Hardware Usage to function and process data. Examples of ICT software include word processing programmes (e.g., Microsoft Word), Computer-aided design (CAD) software (used for designing and modeling), Database software (e.g., Microsoft Access), Desktop Publishing (DTP) software (e.g., Adobe InDesign), Encyclopedia software (e.g., Encarta), Management information system (MIS) software, Video game software. Virtual learning environment (VLE) platforms (e.g., Moodle) and Spreadsheet software (e.g., Microsoft Excel).

Media. This category comprises the materials that carry data and programmes, enabling their storage and retrieval. Examples of ICT media include Hard disk (Internal storage device in computers), Floppy disk (Legacy storage medium), CD-ROM (Compact Disc-Read Only Memory), and Digital Video (Audiovisual content in digital format) services. These combinations of Hardware, software, and human resources offer functionalities beyond what Hardware and software alone can achieve.

Internet (Global network of interconnected computers), Intranet (Private network within an organization), E-mail (Electronic mail for communication), E-commerce (Electronic commerce for online buying and selling), World Wide Web (WWW) (Part of the internet for accessing web pages), Short message service (SMS) (Text messaging service).

The web 2.0 tools mentioned by Basal and Aytan (2014) offer valuable opportunities for enhancing the teaching and learning of English as a second language. They are www.blendspace.com (creates interactive and multimedia-rich

lessons by combining a variety of resources such as videos, images, documents, and quizzes), *www.padlet.com* (acts as a virtual notice board where learners can post their ideas, images, multimedia resources, and comments), *www.scoop.it* (publishes content in the form of an online magazine and useful for classroom projects, research activities, and promoting critical thinking by sharing curated content related to English language learning topics), *www.vialogues.com* (facilitates video-based discussions, providing a platform for teachers to create quizzes and engage students in interactive discussions related to video content), *www.voxopop.com* (enables users to record and share spoken content, making it a great tool for English language teachers to encourage students to practice speaking skills and engage in oral discussions), *www.lessonwriter.com* (assist in creating reading lessons that involve learners in practicing vocabulary, pronunciation, and grammar skills) and so on.

In this way, these Web 2.0 tools offer various innovative and interactive features that can significantly enhance the teaching and learning of English as a second language. They provide collaboration, creativity, and engagement opportunities, making language learning more enjoyable and effective for teachers and students. Moreover, I used ICT-based teaching-learning tools in constructing the research instruments.

ICT in English Language Teaching

In recent years, ICT has transformed ELT by offering new ways to teach and learn via interactive software, online platforms, and mobile apps that provide engaging content and personalized learning. Such integration enriches the learning environment and allows students to practice language beyond the classroom, connecting with speakers worldwide and enhancing language proficiency and cultural awareness. Altun (2015) argues that computers, the internet, smart boards, cell

phones, video games, music players, and so on are used in the target language learning process to raise students' motivation and language awareness. Along the same line, Padurean and Margan (2009) advocate the benefits of integrating ICT into foreign language teaching, such as flexibility in presentation, encouragement of novelty and creativity, immediate feedback, and customizability. Similarly, Cakici (2016) states the effective use of ICT impacts learners and various aspects of the learning process by motivating the learners, thereby enhancing their commitment and engagement, improving their independent learning, collaboration, and communication, and improving the learners' attainment and outcomes.

The integration of ICT in education, both in general and specifically in ELT, has brought about a significant transformation in teaching and learning practices. Over the past four decades, English language learning and teaching methodologies have evolved from traditional grammar-translation approaches to more student-centered methods (Shrestha, 2011). With the support of ICT, English teachers can now effectively impart various language skills such as listening, speaking, reading, and writing, as well as aspects like vocabulary and grammar to their students. Through ICT incorporation and effective use of ICT in ELT, students' English language proficiency is enhanced, and they benefit from a positive and conducive learning environment (Raman & Mohamed, 2013). Learners find themselves easily motivated, and their curiosity toward learning is significantly heightened.

Likewise, Pazilah et al. (2019) assert that incorporating technologies in the English as a Second Language classroom is a source of motivation and interest for learners. The interactive nature of ICT allows learners to engage, share knowledge, and receive assistance, thereby captivating and energizing them, resulting in a more engaging and vibrant learning environment. Supporting this notion, Pun (2013)

affirms that employing multimedia technology encourages students to learn English, enhances their communicative competence, expands their understanding of English culture, improves teaching effectiveness, fosters interaction among students and between teachers and students, creates a conducive learning atmosphere, and offers opportunities for English teaching beyond the confines of the classroom. Additionally, using ICT in ELT can help overcome learners' hesitations, shyness, and difficulties that may hinder language learning, as it provides ample exposure to the language. In line with the educational trends of the 21st century, the integration of ICT into all educational levels, particularly in ELT, is emphasized (Hafifah, 2019).

According to Holmes and Gardner (2016), numerous contemporary ICT innovations are witnessing a growing presence in ELT. Among these recent innovations are Mobile Assisted Language Learning (MALL), Computer Assisted Language Learning (CALL), and Technology Enhanced Learning (TEL).

To investigate the implications of the literature on the integration of ICT in ELT for this research, it's important to analyze how existing studies inform the study's design, focus, and potential contributions.

Use of ICT in English Language Teaching Methods and Techniques

Language is one of the most important elements that affect international communication activities. Learners utilize different parts of English language skills, i.e., listening, speaking, reading, and writing, for their proficiency and communication (Grabe & Stoller, 2009). Similarly, according to Ahmadi (2017), one of the most crucial learning elements is the method teachers use in their classes to facilitate the language learning process. English language teaching has witnessed various ups and downs throughout its history (Richards & Rodgers, 2014). In ancient times, language teaching methods started with teaching Greek, Latin, and Sanskrit languages and

shifted to English as a second language teaching method. Therefore, we have many language teaching methods such as Grammar Translation, Direct, Audio-lingual, Oral Structural Situational, Community, Communicative Language Teaching, Task-Based Language teaching, Silent Way, Total Physical, Suggestopedia, Content-Based Instruction, Natural Approach, Community Language Learning (CALL) and Post-Method Pedagogy. In the initial days of language teaching methods, language teachers used to adopt chalk-talk techniques for their teaching. However, with the beginning of ICT, most language teaching methods have started to use ICT tools for their resources for the contents, preparation of their teaching materials, and using them as their teaching materials.

According to Clements and Sarama (2005), suitable technological teaching materials can be helpful for learners. Likewise, Harmer (2007) declares that learners improve cooperative learning via computer-based language activities. Computer-based activities provide learners with rapid information and appropriate interactive materials that motivate learners to learn more. Furthermore, Anderson et al. (2011) support the view that using technology and authentic teaching materials motivates the learners and enhances language learning experiences. Additionally, Gilakjaji (2017) argues that language teaching methods have changed due to technology, and the application of technology helps learners to learn based on their interests. In this regard, technological development can be historically discussed through various eras that influenced language teaching theories, methods, and techniques.

Pre-Computer Era (pre-1960s). During the advent of computer technology, we used to practice various language teaching methods for teaching English. The grammar translation method, direct method, and audio-lingual method were emerged and widely practiced during this period. The grammar translation method was solely

based on the translation method. However, a direct method introduced the target language as a means of instruction. Furthermore, an audio-lingual method introduced the language lab and audio-visual materials such as tape recorders and films for teaching language accurately.

Nevertheless, they usually base their teaching-learning activities on memorization, following grammar rules, and rote learning, with limited audio-visual materials. These methods could not explicitly witness computer technology during that period. However, they could adopt some ICT in their classroom procedures. In other words, they are also updated and upgraded with technological innovations.

Early Computer-Assisted Language (1960s-1980s). The advent of computers in the 1960s led to the development of Computer Assisted Language Learning (CALL). In the early days, CALL mainly used computer technology to drill and practice language exercises. However, contemporary language teaching methods and even old methods also prefer using computer technology to teach language.

Multi-media and hypermedia (1980s-1990s). During this phase, ICT was formally and widely accepted into language teaching. It integrated multimedia elements like audio, video, and images into language learning software. This period witnessed the use of CD-ROOMs and interactive multimedia language programmes. Furthermore, language learners could also engage in language learning programmes through dynamic and immersive content and presentations. Most language teaching methods during this period also recognized ICT as their teaching material.

Internet and Web-Based Learning (late 1990s-2000s). The adoption of the internet has revolutionized English language teaching methods. Web-based learning platforms and online language courses have become accessible and popular during this period. The internet allowed for real-time communication, collaboration, and

access to various authentic texts from any corner of the world. Most of the language teaching methods during this time have adopted ICT as an unavoidable part of technique or tool.

Blended Learning and Learning Management Systems (2000s- present).

Blended learning, as the combination of both traditional classroom instruction and online activities, gained popularity during this phase. Learning management systems (LMS) such as Moodle and Blackboard facilitated the institutions and delivery of online language courses creating interactive lessons and assessments. Distance learning, online teaching/learning, or virtual teaching-learning are popular nowadays. Most educational institutions have blended their teaching-learning through these innovations.

Mobile and Apps (2010s- present). The beginning of smartphones and mobile devices has led to the development of language learning apps such as Duolingo, Babbel, and Rosetta Stone. They offer the learners flexibility to learn English through gamified and interactive lessons. Online and virtual (YouTube) English classes are common nowadays.

Artificial Intelligence and Adaptive Learning (2010s- present). The latest developments in ICT, such as Artificial Intelligence (AI), have re-colonized every sphere of life. Teaching-learning has also supported personalized and adaptive learning experiences. AI-powered programmes support the learners from different perspectives- get the contents, compare and design the contents, redesign and manage the documents, and present them in their teaching/learning.

Virtual Reality and Augmented Reality (2010s-present). Virtual Reality (VR) and augmented Reality (AR) have also begun to make their way into English

language teaching-learning. Such technologies offer opportunities for learners to practice language skills in realistic scenarios and environments.

Online Language Tutoring and Video Conferencing (2010s-present). The latest technology, such as video conferencing tools, i.e., Zoom, skype have revolutionized remote or online English language learning for language tutoring and virtual classrooms. Learners can connect with native speakers worldwide and interact/learn the English language, enhancing their authentic conversations.

In this way, new language teaching methods adopt ICT in their teaching-learning activities. Even the old language teaching methods have been adopted in their pedagogies. In this sense, the ICTs have become inseparable from English language teaching/learning activities. This historical context supports the study's focus on understanding how current ICT tools and techniques can enhance English language teaching and learning.

ICT in Language Skills

Effective communication is achieved primarily through language. According to Mart (2012), language proficiency is a critical factor in successful communication comprising accuracy and fluency. The emphasis on these aspects in language teaching and learning depends on our specific objectives. When we aim for accuracy, our focus lies in using language correctly, such as correct pronunciation, appropriate vocabulary use, and correct grammar. On the other hand, when we prioritize fluency, our main concern is to convey the intended message.

Language proficiency encompasses four essential skills such as listening, speaking, reading, and writing. These skills can also be categorized into receptive (listening and reading) and productive (speaking and writing) skills. From a communication perspective, listening and speaking are the primary; while reading and

writing are considered secondary language skills. However, language is usually taught and learned interconnectedly and integratively. Hinkel (2006) explicitly describes, "In meaningful communication, people employ incremental language skills not in isolation but in tandem". Therefore, integrating these skills is of utmost importance in teaching and learning a language.

Listening Skills and ICT. Language is complex and interesting to study (Clipson-Boyles, 2013). It is always changing, alive, and evolving. Learning a language is important, especially in today's world of globalization. When learning English, there are many skills to master, and one of them is listening. Listening skills are crucial for learning because there are differences between written words and how English is spoken. So, improving listening skills makes communication easier. Listening skills are important for understanding ideas and communicating (Barclay, 2011). Listening is a process, the first step in learning languages like English (Carrasquillo, 2013). It's an active process and part of passive skills.

Listening ability means using our sense of hearing to understand spoken English. We can practice by listening to English songs, watching movies, or dialogues. This helps us understand spoken English better. Listening is challenging, like other skills (Davies & Pearse, 2000). Learners sometimes find it hard to understand listening exercises.

Some language learning focuses on a specific listening skill, like listening to English in movies, music, news, or presentations (like TED Talks) (Rost & Wilson, 2013). Learners listen to music from all over the world on apps like Joox, Spotify, and SoundCloud to listen to music without downloading (Astuti et al., 2020).

Listening in English is important. We must understand what people say (Fitria, 2021). Understanding spoken words helps us learn to listen. Interesting strategies can

be used for listening exercises in English learning. A teacher's guidance plays a big role in successful listening instruction.

Researchers are curious about technologies for English learning, especially for listening skills. They want to explore platforms and software that can enhance English teaching and learning.

However, some teachers may struggle with integrating technology effectively into their teaching practices. Tran et al. (2023) express concerns about teachers' ability to monitor and facilitate students' progress effectively when using technology. Nonetheless, the benefits of technology in education, particularly for language learning, are well-documented. It is reported that students respond positively to technology-based learning activities, finding them engaging and enjoyable, as observed by Khan et al. (2021).

To bridge the gap between teachers' and students' perceptions of technology in education, interactive and enjoyable technologies are being developed to enhance English language skills. These technologies aim to facilitate interaction between teachers and students, particularly in developing productive skills. While there is recognition that technology's potential for facilitating interaction is still evolving (Tuma, 2021), its use in sharing learning resources has proven effective.

Choosing the right technology is crucial and should align with students' levels and needs, as Mulatasih (2023) emphasized. Teachers are encouraged to select technology that complements their teaching and serves as an effective, efficient, and meaningful medium for learning. Exploring ICT or software for English language education, particularly for enhancing listening skills, is an area of interest for researchers. In pursuing effective language teaching and learning, ICT offers innovative avenues to bolster listening proficiency. ICT supports language learners to

use authentic audio or audio-visual materials in their teaching-learning. They are podcasts, audiobooks, and language learning apps that expose learners to various accents and real-life conversations. Video-sharing channels such as YouTube would be another source of learning the language more accurately and effectively. Furthermore, they can get listening activities, design comprehension exercises, and encourage learners to transcribe and analyze spoken content to improve their listening activities.

Speaking Skills and ICT. Using technology like computers and interactive tools (ICT) to improve speaking skills has been studied a lot. Research shows that modern technology should be part of education to prepare students for today's digital world. Traditional methods might not prepare students for jobs now. Naciri (2019) says that schools must use technology to prepare students for the future and their speaking skills. Van den Akker et al. (2003) agree that technology should match how we teach. This helps students learn skills they need today. Drent (2005) finds that using technology in class can help students remember better and stay motivated. It also helps them understand things more deeply. Working together, like pretending or solving problems in groups, can be made easier with technology, leading to better learning.

In language classes, like learning to speak another language, it's important. Richard (2006) thinks that speaking is the most important. Nunan (1991) says if students can talk well in a language, they do well. Not having chances to talk in class can make students not like learning. But fun speaking activities can make them excited about learning. Computers and other tools like projectors and online stuff help a lot in teaching speaking.

Warschauer et al. (2000) discuss two ways to use technology in class. One is about helping students learn independently, and the other is about practicing real-life skills. Using technology in English language learning, especially speaking helps students improve in and out of class. This matches new ways of teaching with technology and good teaching methods. Virtual classes, audio, audio-visual, or video conferencing tools such as Zoom, Skype, and English language learning apps offer opportunities for learners to imitate, practice, and produce the language correctly and accurately. They could access native speakers via ICT tools. Speech recognition software/tools provide instant feedback on pronunciation. Online seminars, discussion forums, and video blogs would engage the learners in oral discussions, fostering their speaking skills in terms of fluency and confidence.

Reading Skills and ICT. This is known as Information and Communication Technology (ICT). It's like using smart tools to make learning easier. These technologies let us communicate, create, store, and find information in new ways (Nordin et al., 2010).

Technology can also help us become more independent learners. It lets us control how we learn and when we learn. Teachers can use technology to teach better, too. They can find useful materials and ways to explain things (Nordin et al., 2010).

Reading is an important skill that helps us understand things. It is like having a conversation with the words on a page. Technology makes reading more interesting. It can help us find many different reading materials, like articles from faraway places (Wernet et al., 2000).

Reading is important in many subjects, even when learning English as a second language. It helps us learn and communicate better. It's like a superpower that makes us smarter and more creative (Maduabuchi & Emechebe, 2007).

But using technology in education can be a challenge. Sometimes, teachers need to learn how to use these tools. Also, schools might not have enough money for them. In Nigeria, where this study focuses, there are issues like expensive computers and software, and sometimes the technology doesn't match the culture (Aduwa-Ogiegbran & Iyamu, 2005). The ICT tools play a vital role in reading practice among English language learners. It can extensively provide varied authentic texts via digital libraries, e-books, online articles, etc. Language learners can access diverse genres, news stories, and literature worldwide. Various tools or apps, such as annotation apps support and facilitate the learners to read the texts comprehensively and effectively. Online platforms can also provide various interactive reading assignments, quizzes, discussions, and so on to facilitate comprehension and critical thinking.

Writing Skills and ICT. Various definitions exist for the term “writing.” Quintero (2008) states that it signifies a profound instance when thoughts transform into words, necessitating effort to intertwine them and give substance to the multitude of ideas swirling within our minds. According to Henao (2017), writing involves a sequence of cognitive procedures, encompassing contemplation of content, articulation, and composition. This compels students to critically evaluate the writing process, including considerations of grammar, vocabulary, and coherence, which evolve with language exposure.

Rojas (2011) maintains that students enhance their writing proficiency by harnessing technological resources such as computers, blogs, and web pages, contending that these tools facilitate learning. The results reveal that students perceive writing as a skill they have refined more than others, attributing their progress to their interaction with English through readings, guides, and texts.

In alignment with this, Diaz et al. (2011), illustrate how technological advancements, like CD ROMs containing multimedia components, have greatly advanced language education in Chile, fostering diverse exercises and enabling students to express themselves using the introduced vocabulary freely. Consequently, learners have made strides in all language skills, empowering them to communicate more fluently and effectively. ICT provides sufficient opportunities for language learners to practice writing skills as a process and as a product. It also offers innovative ways to enhance writing skills through word processors and writing software such as Microsoft Word and Google Docs. Such software and apps support the learners in drafting and editing their written work. Grammar and spell check apps help them refine their language accuracy. Collaborative writing platforms also encourage them for their effective written communication, collaborative writing, sharing ideas and information through their writing, and working in a team. Blogs and wikis provide them with platforms for publishing and sharing their writing or written creations with a wider audience.

Teaching Language Systems and ICT. The ICT can also support language learners in learning language systems such as grammar, vocabulary, pronunciation, and language functions.

Grammar can be best taught, learned, and practiced through ICT. The ICT provides various tools to enhance grammar instruction in English language teaching. For this, grammar apps (i.e., Grammarly, Duolingo, etc.), online grammar resources (Purdue OWL, etc.), and interactive grammar apps might be useful for English language learners to learn and practice grammar. They are also useful for interactive exercises; explanations, instant feedback, and learning language at their own pace and time (Alkamel & Chouthaiwale, 2018).

Similarly, vocabulary learning and retention can be made through ICT. It presents a wide range of vocabulary in different forms. Vocabulary can be learned via fun and games. Flashcard apps, English language learning apps, online dictionaries, and thesaurus would be the best sources for vocabulary learning.

Similarly, pronunciation can be best taught, practiced, and learned via ICT. ICT tools such as speech recognition software, phonetic apps, phonetic charts, and so on improve pronunciation and phonetic skills and can support language learners in practicing and mastering pronunciation. This comprehensive use of ICT across language skills underlines its critical role in modern ELT methodologies and aligns with the study's focus on leveraging technology to enhance language proficiency.

Need for ICT in English Language Teaching

In the contemporary era, ICT-based teaching is vital in providing quality education and developing global human resources. It significantly contributes to English language teaching by enabling learners to explore and disseminate modern ideas, fostering active learning, and conducting authentic assessments. Emphasizing ICT in education is crucial to cultivating independent English learners, as it offers diverse materials on websites, videos, and tutorials. Relying solely on teachers and limited textbooks in the ELT process may not lead to optimal success.

ICT integration is imperative for successful English language teaching and learning activities. It facilitates the incorporation of listening, speaking, reading, and writing skills, promoting interactive and dynamic teaching approaches. According to Ghasemi and Hasheni (2011), ICT enhances literacy skills by providing greater exposure to the written word, leading to improved quality, accuracy, and increased learning opportunities. Indeed, successful teaching without ICT is hard to imagine, as it is essential for the overall development of English language teaching and learning.

Using modern ICT devices, such as online dictionaries, CDs, DVDs, websites, YouTube channels, and blogs, creates a real-life environment that enhances teachers' and learners' knowledge and confidence.

Similarly, in English language learning, ICT is crucial in facilitating learning through technological tools. Standardized tests like TOEFL, IELTS, GRE, GMAT, and others guide teachers in developing adaptable learners. Proficient learners need to be effective communicators, capable of discussing various topics and sharing ideas for different purposes using ICT tools. Hence, ICT is important in transferring knowledge and skills in English teaching and learning time (Alkamel & Chouthaiwale, 2018).

The relationship between teachers and ICT is inseparable in the current ICT-driven world. Teachers serve as role models for their learners and must be competent in all aspects of teaching and learning, including ICT-based instruction. They need to be familiar with ICT tools, and teaching strategies, and utilize digital materials effectively to enhance learning experiences. In this context, Albirini (2006) emphasizes that teachers require ICT competencies, including knowledge, skills, and experience, to effectively use technology for tasks such as student record-keeping, parent communication, and preparing presentations.

English language teachers must possess competencies and confidence in their ICT skills to implement technology effectively in language teaching. However, the lack of knowledge hinders the integration of ICT in ELT. Teachers must stay competent and confident in the rapidly evolving technologies that can be integrated into teaching and learning activities for effectiveness. Similarly, the Teacher Competency Framework (2016) highlights the importance of teachers' ICT competence in designing and creating digital materials for teaching and

communication. Integrating ICT into daily pedagogical activities can help refresh and enhance their ICT-related knowledge and skills in ELT classrooms.

In Nepal, teachers' competencies in ICT seem to be still in their early stages. From my field experience, many teachers only use basic ICT tools and functions such as internet browsing, email, and word processing. Due to limited exposure and knowledge about computers and other technologies, they lack confidence in using ICT in ELT classrooms and schools (Rana et al., 2020). Teachers must develop more competence and confidence in ICT to leverage its potential for effective teaching and learning.

Alazam et al. (2013) propose that ICT can boost motivation and participation in the teaching and learning process. Along the same line, Kaarakainen et al. (2018) argue that teachers with ICT skills emphasize collaborative learning and encourage active engagement among students in acquiring knowledge. Similarly, du Plessis (2016) reveals that teachers who incorporated ICT tools such as YouTube videos, PowerPoint, and Excel could increase students' confidence and enhance their involvement in the learning process. Moreover, the meaningful and pedagogy-based integration of ICT in the classroom was more innovative in promoting learning.

In addition, Willis et al. (2019) claim that teachers proficient in using digital content like images, and videos, managing blogs, and creating links to online information could personalize the learning experience, engage students effectively, and foster an interactive atmosphere in the classroom. Furthermore, Boronenko et al. (2020) contend that teachers' ICT skills and innovative practices supported students' engagement and motivation in learning and contributed to both formal and informal aspects of teachers' professional growth. Regarding the knowledge of ICT by teachers, Alazam et al. (2013) argue that most teachers had adequate skills in using

word processing functions and managing files on the computer but lacked basic skills in utilizing spreadsheet software for teaching purposes.

These reviews demonstrate that teachers' ICT skills are crucial in bringing about methodological changes in the teaching and learning environment. However, limited existing literature explores how teachers develop and improve their ICT skills.

Problems and Challenges Integrating ICT in ELT Classrooms

Education has been redefined as the society and market have changed their facets. The teachers and the learners of the 21st century should be empowered to tackle many economic, social, and technological challenges (Paneru, 2023).

Regarding the technological challenges, ICT has revolutionized traditional teacher-centered education, promoting interactive and student-centered learning experiences. It can motivate learners, foster collaboration, and enhance their autonomy. However, this integration poses significant challenges, especially in developing countries such as Nepal, where limited access to telecom infrastructure, low computer literacy, and lack of awareness hinder progress (UN, 2003). Furthermore, Paudel (2020) presents several challenges for teachers and students. They are related to infrastructure management, pedagogical skills, technological skills, ICT-unfriendly-textbook and curriculum, and parents' attitudes.

Such constraints negatively impact teachers' motivation to use ICT in the classroom. Some more constraints, such as the lack of time to gain confidence and experience with technology, limited access to reliable resources, an overloaded science curriculum with excessive content, assessment methods that do not require the use of technology, and a lack of subject-specific guidance on effectively utilizing ICT to support learning also discourage the teachers from using ICT in the classrooms (Osborne & Hennessy, 2003). Furthermore, Salehi and Salehi (2012) describe various

barriers and challenges in integrating ICTs into education. They are teacher-level and school-level barriers, material-related and non-material-related barriers, as well as micro-level and macro-level barriers. Similarly, Ertmer (1999) classifies challenges as extrinsic barriers (e.g., access, time, support, resources, and training) and intrinsic barriers (e.g., attitudes, beliefs, practices, and resistance).

Nepalese educational institutions face significant difficulties integrating ICTs into classrooms, resulting in relatively few schools offering ICT-based education. Most of them are poor ICT infrastructure, low computer literacy, lack of awareness, insufficient financial support, poor economic background, inadequate training opportunities, lack of skilled experts, insufficient curricular and textbooks ICT-friendly materials, lack of comprehensive plans and policies, and limited public-private partnership (Wagley & Jha, 2013; Paudel, 2020).

Such challenges and difficulties are usually caused due to inadequate funding and financial support. The majority of schools in rural areas have been facing infrastructural crises, such as computers, reliable internet, multimedia projectors, e-library, and so on. The ICT-poorly-literate/illiterate and irregular power supply in remote areas adds to the challenges. Additionally, students from economically disadvantaged backgrounds often cannot afford expensive ICT equipment, while their limited computer literacy poses additional barriers to ICT use. Furthermore, the lack of public awareness, negative understanding of the use of ICTs and the lack of explicit incorporation of ICT in the curricula and textbooks hinder ICT-friendly teaching-learning in Nepal.

Integration of ICT into Curriculum and Textbooks

In recent years, the field of English language teaching has undergone a transformative evolution in terms of its contents, pedagogy, and practices. It is also

largely influenced by the rapid advancements in ICT. Integrating ICT tools and resources into the English language teaching curriculum has emerged as a response to the changing dynamics of education and the demands of a globalized world. As digital technologies become global, teachers recognize the need to harness their potential to enhance language learning and provide students with relevant skills for communication in the modern era. Fusing traditional pedagogical principles with innovative ICT solutions has paved the way for interactive and personalized learning experiences, global connectivity, and the cultivation of essential digital literacy skills. In such a context, the integration of ICT in the English language teaching curriculum stands as a dynamic and promising avenue, shaping the landscape of education to better equip learners for the linguistic and technological demands of the 21st century.

Considering such facts, the secondary-level English language curriculum has also incorporated ICT in its introductory part, competencies, principles of learning facilitation, learning resources, instructional strategies, and evaluation tools (MoE, 2078 BS).

Regarding the secondary-level English language textbooks, ICT has been slightly incorporated into its texts such as Unit 8, Science and Technology of grade nine (Minister of Education, Science & Technology, 2022, pp. 93-106) and likewise Unit 7, Cyber Security of grade ten (Minister of Education, Science & Technology, 2023, pp.102-118). Furthermore, the use of ICT has been explicitly sought to practice while teaching English language skills and aspects.

By implementing an ICT-supported curriculum, teachers tend to shift from a traditional teacher-centered approach to a student-centered teaching approach. It also allows them to teach English language skills such as listening, grammar, and writing. Furthermore, the recent COVID-19 pandemic has allowed Nepalese educationists to

develop human resources and ICT infrastructures in schools, leading to new teaching approaches. With the mandatory closure of schools for an extended period, e-learning and classes via Zoom and Microsoft Teams, have been significantly practiced (Dawadi et al., 2020). Rana's (2018) study highlights that the ICT-supported curriculum is crucial for teachers to connect digital content with the assigned texts based on the curriculum and to conduct virtual classes whenever needed. However, this integration enables teachers to adapt to changing circumstances and deliver education effectively, even in challenging situations like pandemic-induced school closures. In this way, integrating ICT into the school curriculum has brought benefits such as improved student learning, teacher organization, and adaptability to changing circumstances. However, challenges persist in certain regions, requiring further efforts to maximize the potential of ICT in education.

ICT in Education Policies in Nepal

Nepal has experienced a delayed adoption of technology. In recent years, ICT policies in the education sector have been actively formulated to enhance the quality of education and cultivate skilled human resources. Various plans and policies have been introduced for this.

The Information Technology (IT) Policy 2000, endorsed by the Ministry of Education (MOE) in Nepal, has envisioned placing the country on the global map of information technologies within five years. It has outlined key objectives relating to IT, such as accessibility, knowledge-based society, internet connectivity, computer education, promotion of IT industries, international market presence, and so on. The policy has accorded high priority to research, development, and extension of information technology by involving both the public and private sectors.

By promoting accessibility, knowledge-based development, internet connectivity, computer education, and IT industry growth, the policy has aimed to position Nepal as a competitive player in the global IT arena. It has also encouraged domestic and foreign investment to drive the country's progress in the digital age.

Similarly, the IT Policy 2010 is an important plan for using technology in Nepal. It is understood that technology, like computers and the internet, could help in many areas, such as education, health, farming, and industry. This policy has focused on bringing the internet to all schools so that students and teachers can use the Internet to learn, do research, and access many educational resources. Having the internet in schools would help students learn better. It has also supported a technologically friendly school curriculum, teachers' training, and pedagogical practices. In conclusion, the IT Policy 2010 has shown Nepal's commitment to using technology wisely in different sectors, including education.

Regarding IT in Nepal's education system, the National Curriculum Framework (NCF) is a big step for Nepal's schools. It has brought ICT into the education system in two ways. First, students can acquire digital skills for the modern world by learning about computers, software, and technology's impact on society as a subject. Second, the NCF has encouraged teachers to use technology in their lessons to make learning more interesting and effective. Recognizing the importance of technology in education, the NCF aimed to improve teaching methods and make learning more interactive. It also intended to provide students access to a wide range of educational resources worldwide.

Furthermore, the government's commitment to supporting technology integration in schools can be seen in investing in infrastructure, training teachers in technology, and promoting digital skills among students. The NCF-2007 has aimed to

use ICT to improve education quality and prepare students for the digital age. It is a significant step forward for Nepal's education system to meet the needs of the 21st-century learner.

Similarly, the School Sector Reform Plan (SSRP, 2009-2015) is another big effort to improve schools in Nepal. Its main goal is to improve teaching and learning for students to get a high-quality education. The SSRP has focused on updating the curriculum, teaching methods, and assessment system to match modern educational practices. The plan has been dedicated to making learning more interactive and student-centered rather than traditional rote learning. In this context, the plan understood how technology could transform education, so it ensured schools had computers, the internet, and educational software. Using technology, students could learn better, and more opportunities would open up. Furthermore, teachers have been trained through training and workshops to improve their teaching skills and learn how to use technology in their classrooms. In this regard, the School Sector Reform Plan has aimed to bring positive changes to Nepal's education system by using technology, improving teaching methods, and supporting teachers.

Along the same lines, in a three-year plan (2011-2013), IT has been considered a significant effort to use technology in education. Its main goal is to make education better and more accessible using computers and the Internet. The plan has focused on ICT integration into various aspects of education, making education accessible, public-private partnerships collaborating with private technology companies and organizations, improving learning quality via technology, training teachers for their effective use of technology in their teaching, supporting the online teaching-learning, creating digital educational content, improving the infrastructures

for the technology-friendly classroom, effective monitoring through the use of technology, working with companies and bridging the digital divide.

The Guideline for Implementing ICT in School Education (2012) intends to enhance the quality of education by effectively utilizing ICT in school settings. The plan has focused on expanding access to educational resources through the Internet, particularly in community schools, and aimed to achieve this by improving ICT infrastructure. This guideline is likely implemented by the Ministry of Education (MOE) or relevant educational authorities in the specific country or region. The key objectives and features of this guideline are to enhance the overall quality of education in schools by integrating ICT into teaching and learning processes and to access educational resources by leveraging the internet to provide access to a vast array of educational resources such as online learning materials, digital libraries, and educational websites; to develop infrastructure to support the integration of ICT in education by providing computers, internet connectivity, projectors, and other relevant Hardware Usage and software, to train the teachers recognizing the importance of skilled teachers in effectively utilizing ICT; to integrate the ICT into curriculum across various subjects and grade levels.

Furthermore, it also encourages the development of relevant and localized digital content via educational software, digital textbooks, and other interactive learning materials. The ICT would effectively monitor and evaluate the programmes validly and reliably. Furthermore, it emphasizes inclusivity via access to all students from disadvantaged communities or with special needs. It also promotes collaborative work between public and private institutions.

Within this framework, the Guideline for Implementing ICT in School Education (2012) has sought to harness the potential of technology to improve

education quality, provide equitable access to educational resources, and equip students with the skills needed to thrive in the digital era (MOE, 2012).

Similarly, the Master Plan for ICT in Education in Nepal (2013) is an ambitious plan to use computers and technology in schools to achieve national and international education goals by making technology an essential part of learning. It has four main parts: building infrastructures, training teachers, digital learning materials, and improving education. The main goals of the Master Plan for ICT in Education in Nepal (2013) are to prepare teachers, ICT skills standards, motivate ICT-skilled teachers, lifelong learning, and use ICT in evaluation. In this sense, the Master Plan for ICT in Education in Nepal (2013) is an important policy that wants to change education in Nepal with the help of technology.

Moreover, the School Sector Development Plan (2016-2023) has specific objectives and strategies related to using ICT in the education sector. The objectives are to improve classroom delivery by establishing an ICT-enabled learning environment, develop access to learning materials and support professional development packages for incorporating ICT in the curriculum, and improve educational governance and management through ICT. To achieve these objectives, the SSDP outlines several strategies, such as establishing an enabling learning environment, establishing ICT learning centers, incorporating ICT in the government curriculum, developing educational materials for children with visual and hearing impairments, developing portals and websites including e-libraries; training teachers on the use of ICT; developing online and offline training courses and materials; preparing ICT teaching and learning materials for science, mathematics, and English; developing and distributing subject-wise-e-learning resources for students and

teachers; and strengthening school governance and management through enhanced EMIS and CGAS implementation.

This project focuses on strengthening ICT Infrastructure (i.e., EMIS); providing ICT teaching-learning materials to strengthen interactive teaching approaches; establishing ICT learning centers in model schools; preparing ICT teaching and learning materials specifically for science, mathematics, and English subjects; providing necessary ICT infrastructure and teaching-learning materials to schools, implementing a unified accounting software (CGAS) in the Ministry of Education's system; and introducing school-based integrated EMIS, which includes an Equity index, school profiles, and unique student IDs. Such outcomes and interventions demonstrate the efforts of the government of Nepal to incorporate ICT effectively into the education system. By focusing on specific subjects (science, maths, and English) and utilizing ICT to enhance teaching and learning processes, the plan aims to improve the overall quality of education in the country.

Additionally, by strengthening the ICT infrastructure and integrating ICT into the Educational Management Information System (EMIS), the government seeks to improve data collection, management, and decision-making processes in the education sector.

In conclusion, its emphasis on ICT integration in government schools shows a commitment to leveraging technology to enhance educational outcomes and ensure access to quality education for all students in Nepal. Similarly, the teacher competency framework (2016) also aims to make competent use of ICT for teaching, learning, designing appropriate materials for instruction, and updating teachers on the development of ICT.

Teachers' Perceptions on ICT

McShane and Glinow (2008) describe that perception as the process of receiving information and comprehending the world around us. It involves receiving environmental stimuli from environmental stimuli, interpreting the information, and categorizing it based on existing knowledge. Thapaliaya (2014) considers perception a complex and comprehensive process that includes interactions such as selection, compilation, and interpretation of information. However, sensing also influences perception, which involves cognitive processes like filtering, simplifying, and refining the received information.

Mwendwa (2017) identifies several factors influencing teachers' adoption of computer use, such as pedagogical issues, familiarity with computers, teachers' training, availability of time, and availability of Hardware Usage and software. Davis (1989) proposes the Technology Acceptance Model (TAM), highlighting two key factors affecting technology adoption: perceived usefulness and perceived ease of use. Perceived usefulness refers to a person's belief that using technology will enhance their job performance, while perceived ease of use pertains to their belief that using technology will be effortless. Despite revisions to the theory, these two factors remain valid in understanding technology adoption (Samuel et al., 2018).

In this study, teachers' perception of using ICT refers to their acceptance of ICT in their teaching, their knowledge about ICT, and their implementation of ICT in English language teaching. In this sense, teachers' perceptions are perceived usefulness and ease of use of ICT in English language classes. English language teachers perceive ICT variously for their personal, social, and professional benefits and barriers.

ICT as a Source of Enhanced Engagement and Motivation

ICT has the potential to significantly enhance student engagement and motivation through its interactive and multimedia-rich nature. According to Rana et al. (2022), the utilization of ICT in the classroom enhances the confidence of both teachers and students in their ability to use it, and training in teaching and learning fosters achievement and motivation.

Similarly, Liang et al. (2011) state that using technology in teaching makes students more interested and involved in learning. It works differently: students put more effort and time into learning activities, feel more positive about learning, and think more deeply about what they're learning. Whether technology is used in class or after school, students get more chances to talk to teachers, work together with classmates, and get into learning. Some examples of technology that boost student interest are video calls, blogs, websites where they can work together, social media, and digital games (Schindler et al., 2017). Furthermore, gamification techniques, personalization, and Real-world Relevance application through ICT enhance learners' motivation by demonstrating the practicality of what they are learning.

ICT as a Source of Authentic Language Exposure

According to Ahmad (2012), 'materials' include anything that can be used to facilitate the teaching and learning of a language. They can be linguistic, visual, auditory, or kinesthetic and can be presented in print, through live performance or display, or on cassette, CD-ROM, DVD, or the internet. They can be instructional, experiential, or exploratory while informing learners about the language, providing experience of the language in use, stimulating language use, or helping learners make discoveries about the language. Authentic textbooks or ICT materials are such a key

component of language classrooms, that their suitability and effectiveness deserve critical attention (McGrath, 2013).

ICT is a powerful source of authentic language exposure in ELT, providing learners with real-world contexts for language learning. It includes various digital tools and platforms that offer genuine language use experiences. ICT can be understood as a source of authentic language exposure in ELT.

Online Multimedia Content. Learners can access a plethora of authentic audio and video materials on the internet, including podcasts, documentaries, interviews, and news broadcasts. These resources expose learners to different accents, speech patterns, and communication styles, contributing to improve listening and comprehension skills. Online multimedia content can be a valuable resource for English language teaching. They can be obtained from YouTube channels, podcasts, interactive websites, online news articles, interactive games, video streaming platforms, educational apps, online exercises and worksheets, social media platforms, virtual tours, cultural experiences, and so on (Heil et al., 2016).

YouTube Channels, for example, can offer many language programmes along with BBC Learning English with a wide range of videos on grammar, vocabulary, pronunciation, and more. Similarly, TED-Ed provides engaging animated lessons on various topics with interactive quizzes. Similarly, post casts provide ESL Pod, which provides English lessons in podcast format with transcripts and explanations. Moreover, VOA Learning English presents news and feature stories clearly and understandably (Sweeney & Moore, 2012).

Similarly, interactive websites and Duolingo are some of the online multimedia. Duolingo is a language learning platform incorporating multimedia, including audio and visual cues. Similarly, breaking News English News articles with

various language activities and comprehension exercises are presented. Furthermore, online news articles also provide news articles with vocabulary explanations and language activities. Similarly, Newsela is a news article at different reading levels, allowing for differentiation in the classroom (Hickey, 2015).

In the same vein, interactive games such as WordReference and BBC Skills Wise are useful for teaching English through their platforms with games, quizzes, forums for students to practice, interactive games, and activities for grammar, spelling, and vocabulary, respectively. Similarly, video streaming platforms such as Netflix or Amazon Prime and national geographic channels are also useful for language teaching. Video streaming platforms select English language movies or series with subtitles for language learners, whereas National Geographic Channel: Educational documentaries focusing on language development. Furthermore, educational apps such as Quizlet and English Conversation. Quizlet creates flashcards and quizzes for vocabulary building and Speak English Conversation is an app for practicing spoken English through conversations. British Council - Learn English Teens is an important app for resources of English language teaching learning specifically designed for teenage learners (Moundridou & Virvou, 2003).

Likewise, social media platforms such as Twitter, and Instagram are used to teach English. Twitter is used for Grammarly for daily English language tips and exercises, and Instagram is used by English language teachers often by sharing valuable content through posts and stories (Moundridou & Virvou, 2003). When using online multimedia content, it's essential to choose materials that align with the proficiency level of the students and the specific language skills teachers want to target. Additionally, incorporating various media types (videos, podcasts, games, etc.) can provide different learning styles.

Interactive Language Apps. Language learning applications often use interactive exercises, quizzes, and games incorporating authentic language use. These apps may also offer speech recognition technology to enhance pronunciation skills.

Hickey (2015) describes numerous interactive language apps that can benefit English language teaching. Some of them are as follows: Duolingo is a helpful app for learning English. It turns lessons into games and covers speaking, listening, reading, and writing. Teachers can use it to give students targeted grammar, vocabulary, and pronunciation practice. It's a versatile tool for the classroom.

Likewise, Babbel is a helpful app for English learning. It offers lessons to individual needs and incorporates speech recognition technology. With real-life dialogues, the app emphasizes practical English language use. Teachers appreciate its utility for crafting personalized learning plans and facilitating the application of English skills in everyday environments.

Moreover, Busuu, a beneficial app for learning English, focuses on talking with native speakers and personalized study plans. Its emphasis on real-life communication makes it stand out and provides tools for teachers to track student progress. The app also includes lessons that concentrate on grammar, contributing to a well-rounded language learning experience. Teachers appreciate its features for monitoring and supporting students in their language development.

Likewise, Memrise stands out for its mnemonic techniques, video clips from native speakers, and a diverse range of courses. English language teachers can influence its features to reinforce vocabulary and enhance cultural understanding through engaging multimedia content.

Along the same line, Quizlet offers a variety of tools, including flashcards, quizzes, and games, making it a versatile platform for vocabulary building and

reinforcement. Educators can create custom sets tailored to specific topics, allowing students to engage in self-paced learning and review (Statista Inc., 2015). Likewise, other apps, HelloTalk, provide English language exchange opportunities with native speakers, offering text, voice, and video communication. As a teaching tool, it encourages students to practice their language skills in authentic, real-life conversations, fostering practical English language application.

Furthermore, Lingodeer offers gamified lessons, interactive exercises, and a focus on grammar and vocabulary. Suitable for both individual and group learning, especially for beginners, it provides a dynamic and engaging environment for English language education. Speak English Conversation features role-playing scenarios designed for practicing real-life conversations. As a teaching tool, it encourages developing speaking and listening skills in a practical context, helping students apply language concepts in everyday situations (Stockwell, 2008).

When integrating these apps into English language teaching, it's important to consider students' proficiency levels and align the app's content with teaching objectives. Additionally, some apps offer teacher dashboards or specific classroom features, making tracking student progress easier and providing targeted support.

Virtual Communication. Social media, English language exchange platforms, and video conferencing tools enable learners to converse authentically with native speakers and other learners globally. These interactions facilitate real-time English language practice and cultural exchange.

Virtual communication tools can enhance English language teaching by providing real-time interaction and collaboration opportunities. In this regard, video conferencing platforms such as Zoom, Microsoft Teams, and Google Meet have become essential tools for remote communication, enabling virtual face-to-face

interactions. These platforms offer features like live lessons, discussions, and collaborative group activities, making them invaluable for remote work, online education, and connecting people across distances. Their user-friendly interfaces and diverse functionalities have made them popular choices for individuals and organizations seeking efficient and engaging virtual communication solutions.

Likewise, Google Docs and Microsoft Word Online are virtual communication tools. Students can collaborate on writing assignments, essays, or projects in real-time, and teachers can provide feedback directly within the document. Moreover, Interactive whiteboard tools like Jamboard and Miro have revolutionized collaborative learning by providing virtual platforms for teachers and students to work together on diagrams, mind maps, and various visual aids (Kukulska- Hulme & Shield, 2008). These tools enhance engagement and foster interactive learning experiences, enabling real-time collaboration and creativity in both educational and professional settings. Their intuitive interfaces and versatile features make them effective tools for fostering dynamic and visually stimulating learning environments (Kukulska-Hulme & Shield, 2007).

English Language Exchange Apps

Language exchange apps such as Tandem and HelloTalk facilitate English language learning by connecting students with native speakers, creating real-life conversation practice and cultural exchange opportunities. These platforms offer a dynamic and interactive approach to English language acquisition, allowing users to improve their speaking skills in a supportive and immersive environment (Chinnery, 2006).

When incorporating virtual communication tools, it's important to consider the age and proficiency level of the students, as well as the specific language skills to

develop. Creating a structured and supportive virtual learning environment is crucial for effective English language teaching and learning.

Digital Reading Materials. Online articles, e-books, blogs, and forums provide English language learners with authentic written language samples, exposing them to diverse vocabulary, idiomatic expressions, and writing styles. Digital reading materials are useful resources for English language teaching, offering a wide range of texts that provide different proficiency levels and interests (McGrath, 2013). For example, Project Gutenberg is a digital reading material. It offers a vast collection of free eBooks about classic literature and literary works. With its extensive repertoire, this digital library is an excellent resource for encouraging reading comprehension and engaging in in-depth literary analysis.

Moreover, Storybird is a creative platform where students can craft and share their digital stories, offering a versatile tool for both reading and engaging in creative writing activities. With its user-friendly interface, Storybird encourages students to explore their imaginative potential and enhances their literacy skills through interactive storytelling.

Likewise, Read Write Think stands as a valuable online resource, offering English language teachers a diverse array of interactive reading materials, comprehensive lesson plans, and resources for various genres and skills. With its user-friendly platform, Read Write Think supports teachers in creating engaging and effective English teaching-learning experiences that cater to their students' diverse needs and interests.

International Children's Digital Library (ICDL)

One can discover the rich diversity of children from around the world at the International Children's Digital Library (ICDL). This platform curates a collection of

digital children's books, encouraging multicultural understanding and promoting literacy by providing a global collection of stories celebrating various cultures and perspectives (Weeks, 2007). Access a wealth of multimedia resources on Teaching Books, which are dedicated to supporting reading and literacy. With features like author interviews, book guides, and lesson plans, this platform enriches the English language learning experience by offering teachers and students valuable insights and tools to enhance their understanding and engagement with literature. Read Theory serves as an adaptive reading comprehension platform for reading materials to individual proficiency levels. By providing personalized content, this platform enables students to enhance their comprehension of English language skills in a targeted and effective manner, fostering a more tailored and supportive learning experience.

When using digital reading materials, it's essential to select texts that support the language proficiency level and the specific skills of students. Additionally, incorporating a variety of genres and formats can keep students engaged and provide different learning preferences.

Language Learning Websites. Dedicated ELT websites offer authentic resources such as articles, videos, and exercises to enhance language skills and cultural understanding. Aly (2008) describes the numerous language learning websites that can be valuable resources for English language teaching. Such as BBC Learning English offers a comprehensive language learning experience through its website, providing a diverse range of multimedia resources such as videos, games, and quizzes. This platform caters to learners at all levels, covering various aspects of English language learning. The British Council - Learn English is a versatile resource for learners, offering free materials like videos, interactive activities, and lesson plans.

With a focus on accommodating individuals at different proficiency levels, the British Council facilitates dynamic learning. Voice of America - Learning English is another language-learning website. Tailored for English learners at various proficiency levels, VOA Learning English by Voice of America features authentic news articles, videos, and audio content with transcripts, creating an engaging and authentic language learning experience.

Furthermore, English Club offers many resources for learners and teachers alike, including grammar lessons, vocabulary lists, and interactive quizzes. This versatility makes English Club a valuable platform for developing language skills. Renowned for its gamified lessons, Duolingo makes language learning enjoyable and accessible worldwide. The platform covers grammar, vocabulary, and pronunciation, providing users with an interactive and engaging learning experience.

Likewise, Breaking News English combines language learning with current events, offering news articles with language activities and lesson plans suitable for learners at different proficiency levels. Quizlet stands out as a versatile platform for reinforcing vocabulary and language concepts. Through flashcards, quizzes, and games, Quizlet provides an interactive approach to language teaching learning (Kung & Chuo, 2002).

Digital Language Laboratories. Language labs equipped with ICT tools allow students to practice listening, speaking, and pronunciation through multimedia exercises and simulations.

Digital language laboratories are indispensable tools in English language teaching, offering interactive and multimedia resources to elevate language learning. Sanako Language Lab stands out with its language teaching solutions, encompassing software for language labs, virtual classrooms, and interactive language exercises

(Asri et al., 2016). Another notable platform is Labster by SANS Inc., providing a digital language lab with features like real-time audio and video recording, pronunciation practice, and interactive exercises to enhance language teaching.

Moreover, Sony Virtuoso Language Lab is a comprehensive solution that facilitates interactive language learning through multimedia resources, including video and audio materials. For a combination of language lab features and interactive language courses, Tell Me More Lab is a valuable choice, covering listening, speaking, reading, and writing skills.

Likewise, GLOTTA Language Lab caters to schools and institutions, offering language lab solutions with multimedia content and communication tools. Another platform is EDUCATELL Language Lab, which offers a digital language lab solution featuring multimedia content, language games, and interactive lessons for effective language teaching. When considering a digital language laboratory, it's essential to evaluate the specific features, compatibility, and user interface to ensure it supports English language teaching goals and the needs of students. Additionally, some platforms may suggest demo versions that explore their functionalities before making any decision.

Virtual Reality (VR) and Augmented Reality (AR). Emerging technologies like VR and AR can immerse learners in virtual environments where they interact with authentic language and cultural scenarios.

Kipper (2013) explained that Augmented Reality (AR) is a departure from virtual reality, where the latter immerses users in a synthetic environment, hindering their perception of the actual surroundings. In contrast, AR overlaps computer-generated information, including sound, graphics, and tactile feedback, into the real world. While AR has the potential to enhance all human senses, its predominant

commercial applications lie in graphics and visual representation. Particularly, AR allows users to view the real world while integrating augmented and virtual objects, acting as reinforcement rather than a complete replacement of reality.

The integration of AR in English language learning focuses on aspects such as vocabulary acquisition. Solak and Cakir (2015) found that employing AR to enhance vocabulary learning for beginner-level undergraduate students. The AR materials incorporated animation and sound, motivating students and positively correlating with academic achievement.

AR was applied in creating a Handheld English Language Learning Organization (HELLO) for students. The outdoor activity included learning games related to various school zones and promoting language listening and speaking through interaction with a Virtual Learning Tutor (VLT) on a PDA device. Results indicated reduced speaking anxiety and enhanced learning experiences for students (Liu, 2009).

Layar is an AR app that allows users to create interactive print materials, enabling language learners to access additional content, such as videos or quizzes, by scanning printed materials. Word Lens (Now Google Translate) integrates AR within Google Translate, translating text in real-time using the device's camera, supporting vocabulary acquisition and language comprehension. Zappar is an AR platform that enables interactive content creation, such as games, quizzes, and storytelling, enhancing language learning engagement. Tobar-Munoz et al. (2017). Augment is an AR app that enables users to visualize 3D models in the real world, providing opportunities for vocabulary building and object identification in English. Sky View is an AR stargazing app that overlays information about constellations and celestial

bodies, offering an engaging way to learn English vocabulary related to astronomy and space (Barreira et al., 2012).

VR technology is increasingly being integrated into educational settings, including language learning classrooms, to cater to various learning styles (Garduno et al., 2021). This literature review examines the key advantages and potential risks of VR in language learning.

VR provides a highly impressive learning experience by simulating environments (Hamilton et al., 2021). This unique feature allows students to engage with language learning realistically and interactively. Since physical travel to practice a target language with native speakers may not always be feasible, VR can offer a simulated environment for students to communicate with native speakers, facilitating second language acquisition (Panagiotidis, 2021).

The element of entertainment provided by VR captures students' attention and encourages engagement during language learning (Liu et al., 2020). VR offers an active learning experience that bests passive reading, as students interact and apply their language skills, leading to better learning outcomes (Yildirim et al., 2020). Moreover, VR helps to reduce difficulty and keeps learners focused on the learning process, thus improving their language acquisition (Lege & Bonner, 2020).

Language learning through VR is not limited to traditional classroom settings. VR can interactive English language learning experiences outside the classroom, such as virtual field trips or cultural experiences, allowing students to explore and participate in the target language and culture in a more meaningful way (Cardullo & Wang, 2022). These experiences offer opportunities for contextualized English language use.

The comprehensive overview covers various digital tools and technologies beneficial for teaching and learning English. Encompassing online multimedia content, interactive language apps, virtual communication platforms, digital reading materials, English language learning websites, digital language laboratories, online collaborative projects, and virtual reality (VR) (Garduno et al., 2021) and augmented reality (AR) (Solak & Cakir, 2015), the summary emphasizes the diversity of resources available. These tools offer immersive and interactive experiences, catering to different proficiency levels and language learning styles while fostering English language acquisition, comprehension, and cultural awareness.

ICT as a Professional Development

ICT as professional development refers to using technology tools, resources, and strategies to enhance teachers' skills, knowledge, and practices. In the twenty-first century, technology has become an integral aspect of teaching and learning, particularly in ELT (Healey, 2018). English language teachers and learners alike have embraced technology, recognizing the pivotal role of teachers' pedagogical proficiency in technology for effective classroom integration (Kohnke, 2021). In the context of professional development, ICT encompasses various digital tools, software, online platforms, and digital resources that teachers can influence to improve their teaching methods, curriculum design, assessment techniques, and overall classroom management. Just as student learning is central to education, the professional development of teachers is equally significant (Munnaa & Kalam, 2021). Despite the worldwide encouragement of diverse professional development modes and activities – such as attending conferences, workshops, and conducting action research – there persists a hesitancy among teachers to adopt technology as a wide range of activities, online courses, webinars, collaborative online communities, and self-paced learning

modules confidently and employ it effectively in language teaching (Kessler, 2018; Shifflet & Weilbacher, 2015). The continuing professional development activities for teachers and to provide deep and meaningful learning experiences situated in the teachers' contexts, so that teachers can gain the technological and pedagogical skills they need to teach twenty-first-century students (Coldwell, 2017). I ICT-based professional development aim to empower teachers with the technological competencies and pedagogical insights needed to effectively integrate technology into their teaching practices.

In ELT, ICT has become a transformative force, offering teachers and learners innovative opportunities to enhance language learning experiences. Integrating technology in ELT involves utilizing digital tools and resources to facilitate language acquisition, communication, and engagement. Implications for professional development in the field of ELT by using ICT such as;

ICT as a Distraction and Disturbance

ICT has undoubtedly brought significant advancements in various aspects of our lives, from communication and education to entertainment and business. However, ICT can also become a distraction and disturbance if not used mindfully and responsibly like any tool. Studies have revealed that instructors believe there is insufficient time in class to deliver content and teach digital competencies to students (Kirkscey, 2012). While many instructors feel they have adequate training and are comfortable teaching students to use technology, there is simply not enough time to do so. Other barriers to technology implementation within the classroom are the limited technical ability of students, lack of funding, feelings of isolation when learning, difficulty connecting with peers, distraction with other applications, and setting boundaries between class and personal life (D'Angelo, 2018). However, with

mindful pedagogical strategies, instructors can overcome these barriers and use technology to enhance student engagement and success.

ICT can be perceived as a distraction and disturbance in major issues such as digital addiction, reduced productivity, attention span decline, sleep disruption, social isolation, cyberbullying, privacy Concerns, distraction while driving, misinformation and disinformation, and health issues.

Individuals should adopt responsible and mindful ICT usage to mitigate these potential distractions and disturbances. This might include setting boundaries for screen time, practicing digital detoxes, disabling non-essential notifications, and prioritizing real-life interactions. It's important to balance the benefits of ICT and its potential negative impacts on well-being and productivity.

ICT as a Means of Blended Learning and E-learning

English language classrooms are experiencing an increasing use of these technologies, highlighting their significance in modern language education. Healey (2018) describes multimedia as integrating texts, graphics, images, videos, animations, and sounds, all managed and controlled through computers.

Incorporating multimedia computers in language teaching has allowed teachers to create practical and authentic lessons. By combining texts, images, sound, and video in a single device, learners can simultaneously internalize multiple aspects of the subject matter.

Similarly, Jayanthi and Kumar (2016) emphasize the numerous benefits of using ICTs in language teaching. They highlight the various developments in ICT, such as language labs, videos, satellite broadcasts, videoconferencing, and web seminars, which have greatly enriched the quality of education both on and off campus. The scholars' views gathered in the paper confirm that ICTs are essential

tools that effectively facilitate the teaching and learning of the English Language. The research demonstrates how multimedia technologies like videodiscs, CD ROMs, DVDs, and PowerPoint projectors can be effectively applied to teach different aspects of the English Language, including literature (plays, prose, or poems), writing, vocabulary development, and grammar. Additionally, the study emphasizes the importance of utilizing tools such as e-mail, websites, and e-libraries to support English Language teachers in their instructional processes.

The integration of ICT in language teaching has brought about significant advancements, utilizing language labs, videos, satellite broadcasts, videoconferencing, web seminars, and multimedia technologies to enhance education quality. English language teachers benefit from these tools, effectively teaching literature, writing, vocabulary, and grammar. Additionally, e-mail, websites, and e-libraries provide valuable instructional support. Overall, ICT adoption in ELT has revolutionized language education, offering engaging and dynamic learning experiences for teachers and learners alike.

ICT as a Resource Material

ICT is an important resource for education. It includes various tech tools and platforms that help share and exchange information easily. From online articles and educational websites to interactive software and videos, ICT gives teachers and students many resources to improve learning. This introduction shows how ICT is crucial in accessing, creating, and sharing educational content in the digital age.

Chisenga (2000) reports that many libraries in academic, school, and public spheres of most countries of sub-Saharan Africa have been facing financial crises, thereby ICT would compensate for such problems. Similarly, Blakes (2006) finds that the available ICT facilities in the libraries studied are inadequate, and digital or

electronic library operations are needed as the backbone for digital-age resource sharing. The government should provide separate and specific policies and guidelines for acquiring and using ICT facilities in Nigerian academic libraries. Resource-sharing cooperatives/initiatives should be put in place and funded by the government to enrich the service and resource base of the libraries in each of the six geo-political zones of the country. The excerpts highlight the need for significant improvements in ICT infrastructure and support to enhance resource sharing and educational access in the digital era.

ICT as a Teaching Material

ICT is a really useful tool for teaching in schools today. It has lots of cool features like videos, interactive activities, and online resources that make learning fun and interesting. Teachers can use ICT to create personalized lessons that match each student's way of learning. This helps students stay engaged and excited about their education. Using ICT in teaching can improve students' understanding and remember what they learn. It also helps them develop important skills for using technology in the future.

Dhakai (2018) highlights that teacher satisfaction with the effective use of ICT tools in mathematics education is a crucial factor. While some teachers express contentment with training, workshops, and seminars for improving their technological knowledge, they find challenges in integrating this knowledge with pedagogical skills for teaching online mathematics effectively. Online learning primarily revolves around computer collaboration as a key activity.

According to Jorge et al. (2003), incorporating ICT tools into teaching can result in improved learning competencies and more opportunities for communication among students. Research suggests that ICT tools can change teaching methodologies,

particularly by supporting student-centered approaches to instruction and fostering the development of higher-order skills through collaborative activities.

In recent times, the use of ICT tools in education has become more prevalent, and when employed effectively, they offer numerous advantages for learners. Orlikowski and Barley (2001) point out that technology serves as both a resource and a context for communication. This observation holds, and a growing body of evidence suggests that ICT tools can effectively aid students in acquiring subject content knowledge and enhance the overall quality of their learning experience.

Samuel and Zaitun's (2007) findings indicate that while there has been a significant increase in ICT infrastructure and resources in schools, the utilization of these resources in English Language activities remains unsatisfactory. This is likely due to teachers' lack of support and negative attitudes towards technology in teaching. To achieve the desired results, it is essential to address these issues by encouraging teachers to use the vast resources available on the World Wide Web, providing training to update their ICT skills, and promoting the appropriate use of interactive websites, e-mail, discussion boards, and other related ICT tools. The successful implementation of ICT integration in English language teaching requires the cooperation of school administrations and the positive attitude of English teachers.

ICT is super important as a helpful tool for teaching in schools nowadays. It has a lot of cool features like videos, interactive activities, and online resources that make learning fun and interesting. Teachers can use ICT to create lessons that match how each student learns best, making learning more personal (Haddad, 2002). However, some teachers find combining their teaching skills with technology challenging. Still, ICT helps a lot with collaboration in online learning, which is a big

part of education today. Embracing ICT as a teaching tool can improve lessons, get students more engaged, and give them the skills they need for the digital world.

ICT as a Sharing Platform

ICT serves as a powerful sharing platform in today's digital age. With its various tools and applications, ICT enables the seamless sharing and dissemination of information, knowledge, and resources among individuals and groups. From social media platforms and online collaboration tools to cloud-based storage and file-sharing systems, ICT provides accessible and efficient means for people to connect, interact, and exchange valuable content. This sharing aspect of ICT has revolutionized communication and collaboration, fostering a more connected and collaborative world.

According to Dhyani and Sharma (2022), the increasing use of social networking sites like Facebook, Messenger, Twitter, Skype, and Google+ among students and teachers in higher education has become a cause for concern. Studies conducted by researchers such as Al-Dheleai and Tasir (2017) and Wessels and Diale (2017) reveal that a significant number of students and teachers are utilizing these platforms informally for learning purposes. Consequently, educational institutions have started recognizing these digital platforms as supplementary tools for teaching and learning, leading to growing demand and usage of social media for educational activities.

Facebook has emerged as a widely used social networking platform in various sectors, including education, as Wessels and Diale (2017) and Mayende et al. (2014) noted. According to recent data from [statista.com](https://www.statista.com), Facebook currently holds the top among networking sites, with over 2.7 billion active users worldwide. In Nepal, GoV (2014) reported that approximately 1.93 percent of the population uses Facebook,

ranking Nepal 70th in terms of Facebook users globally. Despite limited access to Wi-Fi internet services in rural educational institutions in Nepal (Acharya, 2014), both teachers and students commonly utilize the Android version of Facebook through data packs provided by major telecommunication services like Nepal Telecom and Ncell. Joshi (2016) discusses the significant growth of Facebook and social media in Nepal, with the number of Facebook users exceeding five million in October 2015 and doubling by 2020.

Furthermore, social media platforms offer students opportunities to interact, share content with peers, and establish connections with others, as highlighted by Cain and Imre (2022). The social networking sites present ample chances for collaboration and increased visibility. Additionally, these social media platforms have proven effective tools for fostering collaboration and interaction between instructors and learners. Tran et al. (2023) also emphasized the positive aspects of collaboration and connection among teachers and learners or peers in research papers examining social networking sites like Facebook, Twitter, and Ning.

The study highlighted several challenges faced by the students. These challenges included issues related to internet connectivity, frequent power cuts, lack of familiarity with ICT tools, and the novelty of using Moodle, which was entirely new to them compared to their previous academic experiences. Notably, some students even admitted that it was their first time using a computer, leading to their limited awareness of digital resources (Huffman, 2016).

In today's digital world, ICT is a powerful way to share information and resources easily. Social media platforms like Facebook are becoming popular in higher education because they can help with traditional learning. Even in places with limited Wi-Fi, people in Nepal still use Facebook a lot for education (Acharya, 2014),

However, some researchers worry that social media might not be used seriously for learning. Another platform called Moodle is also used for education, but some students have trouble using it because of internet and technology issues. Still, ICT and social media have changed how we learn and work together in education, giving us valuable tools. We must deal with their challenges and find ways to make learning better for everyone.

Use of ICT in Classroom Teaching

Using technology in the classroom has become more common and important lately. ICT means using tools like computers and the Internet to improve teaching and learning. It helps teachers and students with their lessons by making them more interesting and effective. Pifarre (2019) suggests that the introduction of technology in educational settings supports meaningful learning by enhancing the utilization of existing knowledge, promoting cognitive structuring, encouraging elaboration, deepening processing, and fostering innovative approaches. This integration also transforms the learning atmosphere into one centered around students, enabling them to cultivate self-reliance and authority in their learning trajectories (Liang et al., 2011).

Several studies have looked at how teachers use technology in their classrooms. According to Samoylenko et al. (2022), teachers use various ICT tools extensively, including internet facilities, websites, email, interactive digital whiteboards, word processors, and conferencing tools like Zoom and Microsoft Teams for arranging meetings and classes. They also make use of cloud storage and PowerPoint presentations. However, they seem to use computer resources like professional chats, discussion forums, and web design less frequently.

Hinostroza et al. (2016) found that teachers surround online resources to complement their instructional strategies. For example, they use online resources to explain concepts and illustrate how to develop ideas in a paragraph.

Acharya (2014) surveyed Nepal and discovered that English language teachers used ICT tools such as mobile phones, laptops, multimedia projectors, and web tools like YouTube, Facebook, wiki, email, and blogs in their classroom teaching. In a case study conducted by Vasant and Mehta (2015) in India, e-learning tools like MOODLE were used for online assignments, quizzes, and forum discussions. This usage resulted in improved interactive participation in learning among students.

On the other hand, a survey conducted by Gudmundsdottir et al. (2020) in Norway found that Norwegian student teachers extensively used ICT tools to enhance their students' competence levels. However, a survey conducted by Wu et al. (2019) in China showed a different perspective. Many participant teachers in this study did not find ICT usage helpful in their teaching. They were unwilling to use software tools such as ICT-based classroom management systems despite having good competence in applying them.

The survey study conducted by Buabeng-Andoh (2019) in Ghana revealed that the use of ICT in teaching among participant teachers was limited due to poor ICT infrastructure in schools. Teachers mainly used ICT for basic tasks like searching for information and browsing relevant websites. This highlights the challenges posed by inadequate technology resources in certain regions, which can hinder the effective integration of ICT in education.

On the other hand, a survey conducted by Gómez-García et al. (2020) in Spain found significant associations between teachers' mastery of ICT and its use to explore strategies for guiding students in learning mathematics. The study identified key

variables, such as ICT training, the selection of teaching technologies, and the use of materials and strategies that combine content and technologies, as representative of the successful use of ICT in teaching.

The study further revealed positive correlations among indicators related to 'ICT Training', 'ICT and teaching', and 'ICT domain'. This means that teachers who received adequate ICT training were better equipped to use technology not only for personal use but also for enhancing their teaching practice and enriching the classroom experience. The study emphasized that teachers' proficiency in ICT played a crucial role in developing and delivering content more effectively, sharing resources online, and facilitating collaborative work among students.

The studies show that it's important to train and support teachers in using technology in the classroom. In places where technology is limited, investing in better resources is essential to help teachers and students. When teachers have a positive attitude towards technology and use it well in their lessons, students have more enjoyable and effective learning experiences.

While teachers commonly use tools like PowerPoint, websites, blogs, and the LMS on computers and mobile devices, there's little information about how they use other technology, like smart boards, discussion forums, professional chats, and web design, in English language teaching. This shows the need for more research to understand how these tools can improve language lessons and create exciting teaching methods. As technology continues to evolve, ongoing research and teacher training are essential to make the most of technology in education.

Teachers' Technology Practice in ELT Classrooms

Technology in ELT classrooms can provide numerous benefits, such as enhancing language learning, promoting interactive learning experiences, and

facilitating communication and collaboration among students. The consensus is that successful technology integration in the classroom requires a proper understanding of the roles played by both technology and teachers. Dias and Atkinson (2001) suggest that current technology integration practices involve using technology in ways that align with the curriculum and are future-oriented.

Grabinger (1996) argues that adopting a constructivist pedagogy has significant benefits in utilizing technology to promote meaningful learning, increase student motivation, and facilitate critical thinking and knowledge construction. Consequently, technology should be seen as a tool that aids students in their exploratory learning and knowledge-building, rather than merely a means of transmitting information; it is something students learn 'with' rather than 'from'.

However, it is not definite that technology adoption leads teachers to embrace constructivist beliefs. Dexter et al. (1999) conducted a study that did not find evidence supporting the idea that computers act as a catalyst for instructional change. They concluded that this perspective underestimates the influence of teachers' existing instructional beliefs and practices. According to their findings, if teachers choose to use computers constructively, it is not primarily due to the features of the technology but rather because of their knowledge and expertise.

Judson (2006) surveyed 32 classroom teachers to explore their beliefs about instruction. These teachers were also observed and evaluated using the Focus on Integrated Technology: Classroom Observation Measurement (FIT: COM), which assesses how much technology-integrated lessons align with constructivist principles. Surprisingly, the results showed no significant relationship between teachers' beliefs and instructional practices. Although most teachers strongly supported constructivist

convictions in the survey, they did not consistently implement these ideas in their teaching.

Suwannasom (2010) found that many studies have discovered that teachers use computers because they think using technology fits well with their current teaching beliefs and methods. In other words, they believe that technology aligns with their existing ideas about how to teach effectively. Furthermore, teachers' educational beliefs can indicate how they behave in the classroom, including how they use instructional tools like technology. For instance, in a study by Cope and Ward (2002), high school teachers were interviewed to understand their thoughts about using learning technologies. The researchers used a research approach called phenomenology to explore the importance of teachers' perceptions in integrating technology into their teaching. The study revealed that successful integration of technology is more likely when teachers see technology as tools that encourage students to deeply engage with the content by connecting different aspects of what they are learning.

Agreeing with this idea, Egbert (2008) emphasizes that technology-based learning works best when teachers' pay attention to important factors such as setting clear learning goals, giving students proper training and support, allowing enough time for students to learn relevant technologies, using suitable resources, and using technology only when it truly improves the learning experience. According to this perspective, technology integration is successful when it is carefully connected to the educational goals and the specific needs of the students.

Dias and Atkinson (2001) say that it's really important for teachers to use technology in ways that relate to real-life situations and problems. The technology works best when it's used alongside different subjects, making the activities more

connected to what students experience in real life. Also, students should be encouraged to actively participate in a group of learners, where they can learn more, become experts, and work with others. This active involvement can improve students' ability to learn, think critically, and feel motivated to use technology independently as they continue learning throughout their lives.

To sum up, effective use of technology in English language teaching and learning happens when teachers incorporate technology to improve students' learning based on their abilities, skills, and learning goals. It's important to note that the specific technology practices used by teachers in ELTL classrooms may vary based on factors such as access to technology, institutional policies, and the preferences and comfort levels of teachers and students with technology. As technology continues to evolve, new tools and practices will likely emerge, shaping the future of ELT classrooms. In this context, understanding how teachers perceive and use technology in their classrooms is crucial. Teachers' views of technology and how they use it significantly influence the success of technology integration in English language teaching and learning.

Practices of ICT in English Language Teaching

ICT is defined as a technology in which the function is to support the process of conveying information and communication. The ways of conveying information don't have to be carried out directly between the communicator and the communicant. The development of ICT allows the process of communication between the communicator and the communicant to be conveyed easily.

They can communicate through telephone, internet, e-mail, satellite, television, video conference, etc. The process of those communications applies to language learning. In language learning, there is communication between teacher and

student. Learning is not always carried out by directly subjecting teachers and students to a certain room or a certain place (Kazoka & William, 2016). For example, the teacher can use the internet to give their students lessons, assignments, or other information.

In language learning, ICT has an important role as the “media” bridging and enabling the learning process or direct communication between students and teachers. However, they are not present in the same room or place at a certain time. Language learning and teaching programmes can be created to enable students to learn the lessons with guidance, instruction, information, or further explanation (Wujiabudula, 2018). ICT in language learning is used as a reference book. The computer can store unlimited lessons or references, accessed anytime, anywhere, and accurately.

Regarding the usage and practice of ICT in ELT classrooms, Viswanathan (2017) sets out the seven ways ICT is used in language learning.

Presentation. Some material for language learning such as text-based materials, audio-video needs to be presented to the learners. The presentation helps learners understand the learning material well. So, ICT-based presentation plays an important role in secondary English language classrooms.

Practice. Some of the different exercise types are possible to be provided with ICT, incorporating the presentation stimuli in varying combinations of text, audio, and video format. ICT also offers the possibility of analyzing learners’ responses with appropriate feedback.

Similarly, teachers present, demonstrate, and explain to the whole class, support and explain things to individual students. Students can work alone at their own pace, students work in groups, students work on exercises or tasks individually at the same time, students are given presentations on the whole class, students take tests

and assignments, students are engaged in inquiry-based activities, students discuss ideas with other students and the teachers, students reflect on their learning and students participate in assessing their work, etc. are some different types of practices through ICT in secondary English language classroom.

Authoring. In applying ICT in language learning, the teacher can purchase ready-made materials or create exercise materials using various authoring tools based on Hartoyo (2012). Teaching was not as effective without using ICT resources to facilitate. Students increasingly access computer-based materials beyond the classroom and such materials are used for self-study purposes. We can share our documents or our compositions with all students and teachers to meet their needs.

Computer-Aided Assessment. Computer-Aided Assessment (CAA) is increasingly important in English language teaching and learning. This media tests and assesses students' understanding after learning some courses. Computer-aided assessments are appropriate and interesting for both teachers and students. It can improve student performance in summative assessments. It increases the frequency of testing and better feedback. We use computer-aided tests for developing reading, writing, speaking, and listening skills in secondary English language classrooms (Wujiabudula, 2018).

Publishing. ICT tools exist to help teachers and learners or students publish or link their work in a local area network. ICT may be used by the teacher and learners to help them publish their work, such as Word-processors and Desk Top Publishing (DTP) software, audio recording, and editing tools to record interviews, discussions, learning material, etc., Using a digital camera and camcorder to record presentations, drama, role play, and so on, PowerPoint can be used as the medium to publish presentations and Web pages using web authoring tools.

Communications. Technology can help learners and teachers communicate with one another. Some ICT tools that can be used as a medium of information are: Technology can help learners and teachers communicate with one another. Some ICT tools that can be used as the medium of information are 1) Email, which allows language learners to communicate with ‘web pals’ in other countries; 2) Tandem learning; 3) computer-mediated discussion; 4) web-based learning environment; 5) audio conferencing; 6) Video Conferencing.

Simulations. The computer can act as a stimulus that generates analysis, critical thinking, discussion, and writing. The program, which includes simulations, is especially effective as stimuli. Examples of language learning tasks that ‘simulate’ real-world tasks are 1) Web Quest 2) Action Mazes 3) Adventure games 4) Sun power 5) Explodes 6) “Real-life” simulations and 7) video conferences.

ICT is a form of advanced science technology that must be optimized function, especially in implementing learning. ICT provides opportunities for students in the era of global competition to obtain adequate supplies. Innovative ICT-based learning can provide vast opportunities for students to improve and promote competence internationally (Rahman, 2015).

In EFL classrooms, teachers use technology to make learning English more fun and effective. They use interactive whiteboards and online platforms to create exciting and personalized lessons. Language apps and videos help students hear different accents and learn about other cultures. Video calls allow students to talk with people from different countries. Teachers make sure to mix technology with regular teaching to help students learn better and become comfortable with using digital tools (Toktarova & Semenova, 2020)

There are many research studies nationally and internally on English teachers' use of ICT in classroom practices. Some of them are described as follows:

International Context. African countries have been actively increasing the use of ICT in education, and various initiatives have been undertaken to promote its integration. One such project is Imfundo: Partnership for IT in Education, established in 2001, which emphasizes the importance of collaboration in utilizing ICT for educational purposes (Fuller et al., 2004). Since then, there have been continuous developments in ICT implementation across the continent.

Similarly, Mozambique has made significant progress in constructing telecommunication infrastructure, employing a combination of submarine cables, terrestrial fiber, wireless networks, and VSAT to enable widespread ICT access in all Provinces (Muianga et al., 2013).

Teachers in African countries also try to incorporate ICT devices such as cell phones, tablets, computers, and relevant software to bring innovation into their classrooms (Samarakoon et al., 2017). Moreover, access to ICT use in the classroom has been extended to rural schools, facilitated by trained teachers and essential ICT gadgets (Mwapwele et al., 2019).

In some regions, such as South African schools, high-speed broadband internet connections are available (Durodolu & Mojapelo, 2020), further supporting ICT integration in education. However, a study conducted in Kenya revealed that the majority of public high school teachers needed more ICT training as they had limited competence and confidence in using ICT tools for teaching (Belay, 2020). Despite progress, there is a recognition of the need to provide adequate training and support to teachers to utilize ICT in the classroom effectively.

In India, the journey of ICT in education began with the 'Computer Literacy and Studies in School (CLASS) project in 1984. A study by Kundu and Bej (2021) found that private school teachers in India had a positive attitude toward integrating ICT into their pedagogy. Still, they expressed dissatisfaction with the current ICT infrastructure in their schools. Many teachers lacked sufficient ICT knowledge and felt the need for more training to use ICT in teaching effectively. However, the majority of teachers (80%) supported the adoption and use of ICTs for educational purposes.

In India, ICT was launched in schools in December 2004, and further improvements were made in 2010 by introducing computer-aided learning (Kaur & Singh, 2018). Recognizing the significance of ICT, Indian schools assigned it as a separate subject in the curriculum to develop students' computer skills (Singhavi & Basargekar, 2019).

Meanwhile, in Bangladesh, the Ministry of Education launched the National Educational Policy in 2010, aiming to expand the use of ICT in the education process at every level. As a result, Bangladeshi schools gradually established multimedia classrooms (MMCs) and introduced electronic versions of textbooks. Teachers in Bangladesh utilize ICT tools to conduct lessons through peer conversations and group discussions. It is evident from the research mentioned that both Malaysia and Singapore, like many other developing and developed countries, have been increasingly incorporating ICT in their educational systems, particularly in teaching.

In Malaysia, ICT devices such as laptops, smart mobile phones, desktop computers, and various tools like PowerPoint, Flash, and interactive courseware have been implemented since 2003 to support the learning process. Teachers in Malaysia have embraced ICT for tasks like word processing, preparing presentations,

facilitating collaborative learning, and even designing graphic templates. This integration of ICT in the teaching process is aimed at enhancing the overall learning experience for students.

On the other hand, Singapore, being a developed neighboring country of Malaysia, has also embraced ICT in teaching, but with a specific focus on language teachers. In Singapore, language teachers have used video-based platforms like YouTube, documentaries, digital storytelling, and recorded audio-video materials to enhance language learning. Additionally, they utilize spoken tutorials, audiobooks, and digital and Android dictionaries to aid students in language acquisition and improvement.

These trends show that both Malaysia and Singapore are actively leveraging the potential of ICT to create more interactive and engaging learning experiences for students. By incorporating modern technological tools and platforms, teachers can cater to different learning styles, enhance student engagement, and promote better understanding and retention of the subject matter. The use of multimedia and digital resources can make learning more dynamic and accessible, ultimately contributing to improving education in these South East Asian countries.

Furthermore, the rapid development of ICT has had a philosophical impact on various aspects of our lives, including education in general and ELT in particular. Technology's capacity to provide easy access to diverse people, languages, cultures, and social practices has been a driving force behind this transformation (Chun et al., 2016). Consequently, teachers face significant role changes (Uerz et al., 2018). They are not only expected to leverage technology to support innovative teaching and learning methods (Drent & Meelissen, 2008) but also to cultivate their students'

technological literacy, preparing them for the challenges of the 21st-century workforce and learning environment (UNESCO, 2011).

In the situation of ELT, Rodliyah (2018) emphasizes the indispensability of integrating ICT into classroom practices due to the rise of new literacies resulting from diverse modes of communication. These modes encompass conventional written texts in print and electronic forms, as well as semiotic symbols such as visuals, graphics, and audio. Effectively utilizing these multimodal resources requires adopting fresh approaches to language pedagogy, compelling teachers to seamlessly integrate ICT into ELT instruction.

The prevailing trend in combining ICT with ELT has primarily centered on utilizing multimodal technology. For instance, Qian and McCormick (2014) researched the effectiveness of an online discussion forum as a virtual platform for learners to share their experiences, difficulties, and resources, proving highly advantageous. Lee (2014) observed that digital news empowered students to express themselves and engage in self-reflection, leading to improved multiliteracy skills and speaking fluency. Liu (2016) discovered a positive impact on students' vocabulary acquisition and retention through concept-mapping vocabulary learning via mobile applications.

Furthermore, several studies have explored the factors influencing teachers' integration of ICT into ELT. Tondeur et al. (2008) categorized these factors into school and teachers' characteristics, while other researchers (Celik & Aytin, 2014) grouped them into internal and external factors. School characteristics include computer availability, ICT policy, and ICT training, while teacher characteristics encompass gender, computer experience, beliefs, and innovativeness. Internal factors

involve teachers' competence, confidence, and attitudes toward ICT, while external factors relate to infrastructure availability, support, and time.

Despite the substantial number of studies on the use of technology to enhance English learning and teaching, limited information is available regarding the extent to which Indonesian English as Foreign Language (EFL) teachers, particularly those in vocational high schools, integrate ICT into their classrooms (Rodliyah, 2018). He further concentrates on applying specific ICT tools or innovative approaches in ELT.

National Context. In 1994, the Government of Nepal introduced Computer Science as an optional school subject (Karki, 2019). Later, in 2002, the government formulated its first IT policy to integrate ICT into schools (Rana & Rana, 2020). Building upon this policy, the National Curriculum Framework 2005 offered computer studies as a standalone subject in schools and utilized ICT as a tool to enhance teaching across various subjects (MoE, 2005). The objectives set in the 2005 curriculum framework were further reiterated in the National Curriculum Framework for School Education 2007 (Rana et al., 2020).

Continuing their commitment to ICT in education, the government emphasized the importance of ICT for capacity development in the education sector through The School Sector Reform Plan 2009-2015 (Mantrālaya, 2009). To foster broader ICT use in schools, the Ministry of Education (MOE), Nepal, initiated the One Laptop per Child (OLPC) pilot project and the lab model (computer sharing mechanism) project in selected schools. Additionally, they facilitated internet connectivity in District Education Offices (DEOs) and schools through matching funds (Government of Nepal Ministry of Education, 2013). These efforts aimed to enhance access to technology and enrich the educational experience for students and teachers alike.

The master plan for ICT in Education 2013-2017 had a specific focus on four key areas: ICT infrastructures, human resources development, digital content creation, and system enhancement. Additionally, it emphasized ongoing initiatives to promote ICT in education, such as teacher training in ICT through various channels like radio and FM. Furthermore, the plan included the option of computer science as an elective subject for grades 9 to 12, as well as the introduction of computer science engineering courses at the university level (Joshi et al., 2021).

In 2007, Nepali schools began incorporating ICT in education following the signing of a Memorandum of Understanding (MOU) between the Government of Nepal and the Open Learning Exchange (OLE). The agreement aimed to implement the One Laptop per Child (OLPC) project in 26 districts, introduce lab model projects, establish Internet connectivity, and develop digital learning materials for rural primary schools (Joshi et al., 2021; Rana, 2018).

As a result of these initiatives, teachers in urban areas have increasingly adopted ICT tools such as YouTube, Skype, Twitter, blogs, mobile phones, and interactive boards in their teaching practices (Acharya, 2014). Collaboration between NGOs, INGOs, local communities, and government agencies has also been instrumental in extending ICT use in classrooms. However, the lack of electricity in some schools remains a significant challenge, preventing them from fully embracing technology in their teaching methods (Rana, 2018). Additionally, inadequate school infrastructure has been pointed out, as some schools lack essential ICT resources like computers, laptops, and projectors (Rana, 2018). These challenges underline the need for continued efforts to bridge the digital divide and ensure equitable access to ICT resources in Nepali schools.

Nepal is actively committed to implementing ICT in education to align with global trends. However, there are shortcomings in the strategies to address ICT-related challenges (Rana et al., 2020; Rana, 2018). A significant concern is the frustration experienced by school teachers due to the inadequate ICT infrastructure in schools and the lack of comprehensive teacher preparation programmes to support effective ICT integration in teaching activities (Rana et al., 2019).

Despite these issues, there has been positive development at the local level. Local administrations in towns and villages are, equip proactively providing schools with the necessary ICT infrastructures and equipping teachers with the requisite ICT skills in their respective areas (Karki & Dahal, 2020). This local initiative shows promise in bridging the ICT gap and improving ICT integration in education at the grassroots level. However, addressing the broader challenges in ICT implementation nationally will require more comprehensive and cohesive strategies.

The COVID-19 pandemic posed significant challenges to school education, as physical classes were suspended, and students could not attend school. This situation led to a shift in teaching and learning activities, with teachers adapting to online methods despite limited ICT knowledge and inadequate infrastructure in both schools and the students' residential areas. Despite these difficulties, teachers conducted virtual classes using platforms like Zoom, Google Classroom, Facebook Messenger, and YouTube channels (Dawadi et al., 2020).

By addressing this knowledge gap, the study can contribute to understanding the challenges and potential solutions in integrating computer technology effectively in English language instruction. While Nepal has made strides in implementing ICT in education, areas still require attention and improvement.

Several studies have highlighted the limited access to the internet and weak

broadband connectivity in rural areas. For instance, Saleminck et al. (2017) found that internet service providers, primarily focused on urban areas, could not extend their services to remote regions, leading to rural people struggling to access the internet. Similarly, Park et al.'s (2019) fieldwork study in Australia reported that rural communities faced restricted internet access, especially for online activities requiring high bandwidth and stable speeds commonly available in urban areas. Additionally, Wu et al.'s (2019) survey of Chinese rural basic education revealed that students and teachers in rural schools had limited access to information due to poor ICT management.

However, there are some exceptions. Ismail et al.'s (2018) survey in rural school libraries in Malaysia found that computer software programmes and internet connections were readily available in those school libraries, indicating relatively better access to ICT resources in that particular context.

Zhang et al.'s (2023) survey in Western China found that teachers used electronic tools such as electronic plans, word processors, presentation software, instruction design, and multimedia courseware to enhance their teaching practices.

On the contrary, Chisango's (2019) case study in rural secondary schools in South Africa revealed that some schools faced challenges due to inadequate ICT infrastructure, frequent power cuts, and weak internet connections, limiting their access to technology resources.

Similar findings were reported by Rana (2018) in rural Nepal, where schoolteachers acknowledged the benefits of using digital technology in education. However, they faced obstacles such as inadequate ICT infrastructure and limited or no government funding. Non-governmental organizations (NGOs) stepped in to support schools with ICT infrastructure.

These studies highlight the disparities in ICT resources and infrastructure in different regions, with some schools benefiting from technology use while others struggle due to limited access and support. Addressing these challenges is crucial to ensuring equitable access to quality education and harnessing the full potential of ICT in teaching and learning.

The above studies show that rural areas face limited internet access and weak broadband connectivity. Some regions struggle to access the internet due to urban-focused service providers, power cuts, and poor ICT management in schools. However, there are exceptions, with some places having better access to ICT resources, like computer software and internet connections in school libraries. Teachers in Western China use electronic tools to enhance their teaching, but in South Africa and Nepal, inadequate ICT infrastructure poses obstacles. Bridging these disparities is vital to ensure equal access to quality education and fully utilize the potential of ICT in teaching and learning.

Review of Theoretical Literature

A theoretical framework is a reference point for a specific research project, comprising relevant concepts and established theories. It demonstrates a grasp of appropriate theories and concepts related to the research topic and the broader knowledge area being explored. Eisenhart (1991) defines a theoretical framework as "a structure that guides research by utilizing a formal theory, constructed from a well-established, coherent explanation of specific phenomena and relationships" (p. 205).

In this context, the use of ICT in English language teaching by teachers could be studied from different perspectives and theoretical frameworks. Constructivism, computer-assisted language learning (CALL), Technological Pedagogical Content Knowledge (TPACK), connectivism, sociocultural theory, activity theory, ecological

system theory, cognitive load theory, multiliteracies framework, media ecology theory, and critical pedagogy are some of the major perspective and theoretical frameworks.

Here, Computer-Assisted Language Learning (CALL) and Technological Pedagogical Content Knowledge (TPACK) are both frameworks that address integrating technology in education, particularly in language teaching contexts. CALL focuses specifically on incorporating technology to enhance language learning, emphasizing the role of technology in providing interactive and engaging language learning experiences (Levy & Hubbard, 2005). It considers a wide range of digital tools and resources to support language acquisition, from language learning apps and software to virtual reality applications.

On the other hand, TPACK, introduced by Mishra and Koehler (2006), is a broader framework that considers the dynamic interplay between Technological Knowledge (TK), Pedagogical Knowledge (PK), and Content Knowledge (CK) in educational contexts. TPACK emphasizes the importance of teachers possessing a unique blend of technological, pedagogical, and content knowledge to integrate technology into teaching effectively. While CALL is a subset within TPACK, focusing specifically on language learning technologies, TPACK provides a more comprehensive perspective applicable across various subject areas. Both frameworks underscore the need for educators to understand the cooperation between technology, pedagogy, and content to make informed decisions about technology integration in language teaching and other educational contexts. After defining TPACK and critically examining existing instruments, Bostancıoğlu and Handley (2018) introduced a new instrument called English as a Foreign Language-TPACK (EFL-TPACK). They evaluated its validity and reliability by conducting content validation

with CALL researchers and experts. Furthermore, they applied exploratory and confirmatory factor analyses to the survey responses from a large international sample of teachers. In this context, I would like to adopt these two schools of thought and prefer EFL-TPACK as my theoretical framework.

EFL-TPACK as a Theoretical Framework

A new theoretical framework named "EFL-TPACK" can be designed by integrating elements from Technological Pedagogical Content Knowledge (TPACK) and Computer-Assisted Language Learning (CALL) (Wujiabudula, 2018). This framework aims to provide a comprehensive lens for exploring Information and Communication Technology (ICT) use in English Language Teaching (ELT) classrooms. EFL-TPACK emphasizes integrating technology within the broader context of language teaching, considering the dynamic interplay between technological knowledge, pedagogical knowledge, and content knowledge.

In the field of ELT, incorporating ICT tools is guided by TPACK, where teachers blend their knowledge of language content, teaching strategies, and technological capabilities. This integration involves designing activities that naturally incorporate digital resources, such as language learning apps, to enhance language acquisition and provide diverse learning styles (Mishra & Koehler, 2006). In this regard, integrating English language and English language teaching is indispensable for proficient language instruction (Koehler & Mishra, 2009). Rooted in Shulman's (1987) theoretical framework, EFL TPACK extends beyond the basic elements of content knowledge (CK), pedagogical knowledge (PK), and technological knowledge (TK). In the context of EFL, content knowledge (CK) involves a comprehensive understanding of the English language skills (listening, speaking, reading, and writing) and systems (grammar, vocabulary, language functions) along with the

subject matter and cultural nuances. Without a strong foundation in CK, the risk of imparting inaccurate information or fostering misconceptions about the English language among students becomes significant (Koehler & Mishra, 2009; Abdul Rauf, Swanto & Salam, 2021).

Along the same line, pedagogical knowledge (PK) within EFL TPACK is crucial for effective English language teaching methods and techniques. It goes beyond generic pedagogical knowledge to include strategies for language skill development (listening, speaking, reading, writing), language components (grammar, vocabulary, pronunciation), and considerations for diverse learners (Koehler & Mishra, 2009). PK also incorporates an awareness of students' cognitive processes, motivations, and dispositions towards language learning in the EFL context (Farhadi & Öztürk, 2023).

Similarly, technological knowledge (TK) within EFL TPACK emphasizes the dynamic nature of technology in language teaching, requiring proficiency in various technologies relevant to language instruction (Mishra & Koehler, 2006). This includes basic IT literacy, the ability to adapt to new technologies, and staying informed about advancements in educational technology related to language teaching. Furthermore, technological Pedagogical Knowledge (TPK) in EFL TPACK focuses on how technology transforms teaching procedures in English language instruction. This could involve the integration of simulation software for language experiments, multimedia for enhancing listening comprehension, or interactive language learning platforms (Andriany & Adnan, 2022). TPK stresses the importance of using technology to enhance language learning experiences and outcomes (Koehler & Mishra, 2009).

In the same vein, technological Content Knowledge (TCK) within EFL TPACK is concerned with using technology to teach specific content knowledge related to the English language. For instance, knowing how to use multimedia tools to teach grammar rules or using online dictionaries for vocabulary development (Koehler & Mishra, 2009). In addition, technological Pedagogical Content Knowledge (TPACK) in EFL brings together all these literacies to ensure that English language teachers can effectively work with technology, integrate it into their language teaching, and manage technology-based language learning environments (Koehler & Mishra, 2009). TPACK involves understanding how to use various technologies to teach, represent, and facilitate the creation of knowledge specific to the English language, considering language macro skills, language components, and effective instructional strategies within the context of language learning. Overall, incorporating English language and English language teaching into EFL TPACK is a refined and interconnected process that requires a comprehensive understanding of language content, effective pedagogical practices, and the judicious use of technology in language instruction.

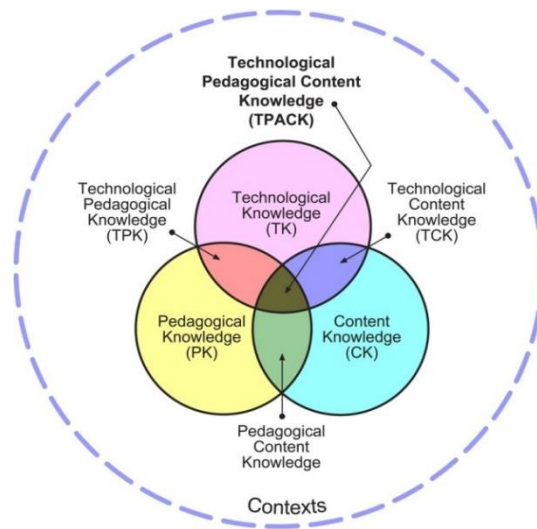
EFL-TPACK serves as an appropriate theoretical framework for exploring teachers' knowledge, perceptions, and practices regarding the use of ICT in ELT classrooms. This framework combines the social constructivist theory of learning with TPACK, emphasizing the role of social interaction and experiential learning in knowledge construction. Teachers, recognizing the dynamic nature of learning, can use past knowledge, preconceptions, and cognitive dissonance to devise curricula and instructional approaches beyond rote memorization, enabling deeper comprehension (Jones & Brader-Araje, 2002). This theoretical foundation supports the study in

understanding the complex interplay between social and individual processes in co-constructing knowledge in ICT integration.

The EFL-TPACK framework, therefore, integrates the principles of constructivism with TPACK, acknowledging the socio-constructivist nature of learning while emphasizing the crucial role of technology in shaping effective language teaching practices. This theoretical foundation will guide the exploration of teachers' knowledge and practices regarding ICT integration in ELT classrooms, providing a holistic understanding of the dynamic relationship between technology, pedagogy, and content knowledge.

Figure 1

TPACK Framework and its Knowledge Components

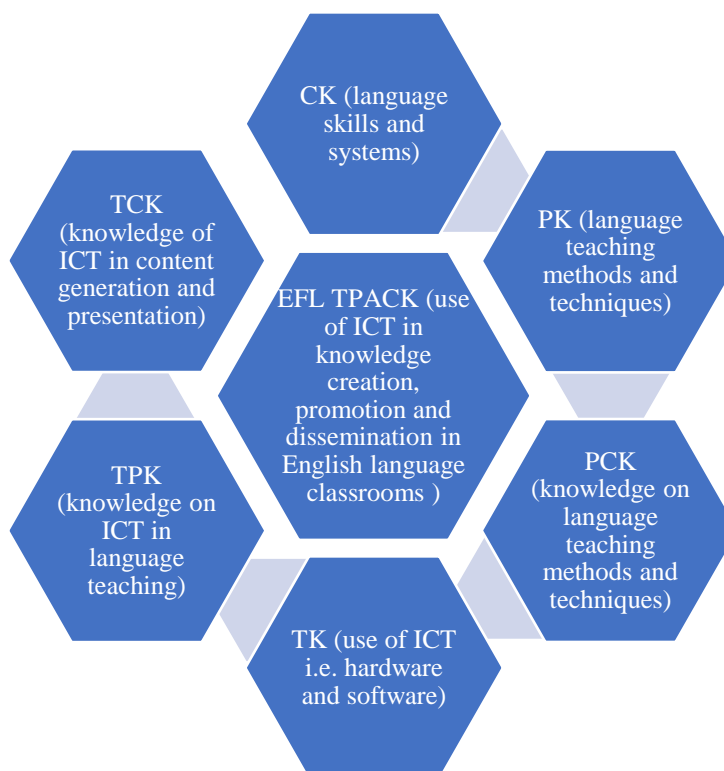


Adopted from Mishra and Koehler (2009) p.17.

Based on the above discussion and figure on TPACK, the EFL TPACK integrating ELT in ICT can be presented as shown in Figure 2.

Figure 2

EFL TPACK Framework



Content Knowledge (CK) within the EFL-TPACK framework refers to teachers' understanding of the subject matter in ELT. This knowledge encompasses concepts, theories, frameworks, evidence, and established practices within ELT. To enhance CK, teachers interact with various forms of content and utilize ICT tools and techniques, including CALL resources (Mishra & Koehler, 2006). The integration of CALL into CK involves using digital materials and language learning apps, fostering a deep comprehension of English language disciplines.

Pedagogical Knowledge (PK) in EFL-TPACK corresponds to a teacher's in-depth understanding of teaching and learning processes in ELT. It involves managing classrooms, planning lessons, and assessing students effectively. As part of PK, CALL plays a significant role in enhancing pedagogical knowledge. Teachers integrate various CALL tools and techniques to employ diverse teaching strategies

that address the needs of students. With its interactive exercises and gamified elements, CALL becomes an integral component in constructing and upgrading pedagogical knowledge within the EFL-TPACK framework.

Technology Knowledge (TK) acknowledges the constantly changing nature of technology, emphasizing the need for teachers to stay updated on technological advancements (Mishra & Koehler, 2006). Within EFL-TPACK, technology knowledge encompasses a multidimensional understanding of how technology can represent and present information in ELT. CALL, as a subset of TK, provides teachers with the skills to effectively utilize digital media and computer-based technologies. While acknowledging the challenges posed by the rapid evolution of technology, teachers within the EFL-TPACK framework engage in continuous upskilling using CALL devices and resources to enhance their teaching effectiveness (Wu & Wang, 2015).

EFL-TPACK emphasizes the effective use of technologies, particularly digital media and computer-based technologies, in knowledge construction within ELT (Kanuka & Anderson, 1999). TPCK, a core component of EFL-TPACK, emphasizes the teacher's technological pedagogical knowledge for effective teaching and ICT utilization. Mishra and Koehler (2006) highlight that the pedagogical use of technology necessitates the development of TPCK knowledge, emphasizing the interconnectedness of technology, pedagogy, and content. Additionally, the societal position of individuals can influence technology use, creating inequalities in technology distribution and access within the EFL-TPACK framework (Van Dijk, 2013). These theoretical principles, with the integration of CALL, provide fundamental guidelines for understanding and interpreting issues related to

technology integration in ELT classrooms, ensuring a comprehensive exploration of the phenomena studied in this research.

Review of Previous Studies on the Use of ICT in English Language Teaching

The use of ICT in English language teaching has been highly sought throughout the history of the English language teaching industry. The audio-lingual method prefers to use a tape recorder for listening and speaking texts and tests. Similarly, many language teaching methods, such as communicative methods, prefer authentic materials for language learning. Here, authentic materials such as YouTube, etc., can be obtained from ICT. With the advent of technology, language teaching experts have attempted to incorporate them into their teaching materials. Now, highly advanced and widespread technology in ICT has influenced all spheres of our lives. English language teaching could not be an exception. Therefore, ICT in English language teaching classes is theoretically demanded, preferred, and used. In this context, various research regarding the use of ICT in English language teaching has been made in and abroad. Here, I would like to review some of the most relevant and latest on the related topics.

Rana (2018) has attempted to explore the experiences and perceptions of sixteen rural primary teachers from five schools across Nepal. His research has emphasized the primary teachers' practices of using ICT and their understanding of its applications, along with their experiences with ICT training, the available resources, utilization, and the impact of the earthquake on their lives and work. For this study, he has employed an interpretative design and socio-cultural approach. His finding has raised questions about the feasibility of fulfilling government policy aspirations for ICT in education within the rural school context, given the challenges of limited resources, training opportunities, internet access, and ICT infrastructure. Notably,

providing ICT support to rural state schools came from development NGOs rather than government funding, which had time limitations. It has also revealed that differences in teachers' status and salary, insufficient ICT training, and lack of internet access hindered teachers' use of ICT in their educational activities. Nevertheless, student engagement with digital devices and a shift in classroom culture have been seen.

Along the same line, Rana et al. (2022) have studied teachers' experiences of ICT training in rural areas of Nepal to examine policy documents to gain insights into the Nepali educational context, focusing on challenges related to infrastructure and professional learning opportunities in a country with difficult terrain and extreme environmental conditions. It explores teachers' perceptions in five rural primary schools regarding their training experiences in using modern educational technologies for instructional activities. Its findings indicate that none of the teachers received ICT training during their initial teacher education. However, the government allowed non-governmental organizations (NGOs) to provide ICT infrastructure and training for rural schools and teachers. This study sheds light on the gap between policy and practice in Nepal's efforts to integrate ICT into education. It underscores the contextual challenges teachers face in their attempts to operate on a global educational level. The research also highlights the complexities and difficulties encountered by teachers in rural areas of Nepal concerning ICT training and implementation.

Similarly, Cosgun and Savaş (2019) have made a study to explore the use of ICT for self-directed professional development. They have adopted a mixed method using online questionnaires comprising demographic information, Likert-type items, and open-ended questions for the ELT teachers at different levels. Their findings have revealed that teachers extensively utilized ICT resources for their overall professional

development, classroom practices, and collaborative efforts with colleagues. They have also highlighted both promoting and inhibiting factors influencing teachers' use of ICT resources.

Wujiabudula (2018) has studied teachers' perspectives concerning CALL and its integration into teaching practices. For this, he has attempted to study their attitude toward CALL, their perceptions of CALL content, their viewpoints on the application of CALL, and their perspectives towards using CALL programmes in language education. The findings of his study have revealed that teachers generally hold positive attitudes toward the content, application, and use of computers in language education.

In the same vein, Rahman (2015) has aimed to determine whether the use of technology in secondary English language classrooms brought significant changes in students' attitudes, motivation, and participation. Having adopted a mixed-method approach, he has employed questionnaires and interviews as his research tools. The findings of his study have demonstrated that teachers who used technology in their English language classrooms were more successful, and students were more receptive, spontaneous, and cooperative in technologically advanced environments. However, implementing technology in the classroom was challenging, including time constraints, lack of knowledge, electricity issues, and school authority rules. His study has also recommended training secondary teachers in using ICT-based materials and empowering them to incorporate practical ICT approaches in the classroom to create an encouraging and productive learning environment for students.

Furthermore, Yunus et al. (2009) describe the use of ICT for learning English and investigate the challenges students face in using ICT for language learning.

Additionally, the researchers have examined how ICT influenced the attitudes of urban school students in Kuala Terengganu, Malaysia, towards learning English.

In addition, the research has utilized a survey design employing a questionnaire as a research technique. The result indicated that students were aware of the benefits of using ICT for language learning, but they did not dedicate significant time to this purpose, spending only 1-2 hours per week using ICT for learning activities. Furthermore, students displayed a positive attitude toward using ICT in learning English. However, they encountered two main challenges: a lack of training in using ICT effectively and a lack of English proficiency. These obstacles hindered their ability to learn to influence ICT for language learning fully.

Likewise, Suwannasom (2010) has investigated technology-using teachers' principles and practices in the context of English as a Foreign Language (EFL) instruction at Thai tertiary institutions. The research involved 47 Thai EFL lecturers from seven public universities, and data were collected through a teacher cognition questionnaire, semi-structured interviews, scenario-based tasks, and unstructured interviews with technology-using teachers. It has been found that teachers' perspectives on technology were influenced by their teaching environment and individual beliefs about English language learning. Teachers have applied their principles when incorporating technology into their instruction. Sociocultural factors have also shaped teachers' views on technology use in EFL teaching contexts, leading to theoretical implications regarding teacher cognition. Practical applications of the research include encouraging EFL teachers to reflect on their teaching principles in their specific contexts, providing models of technology use for EFL teaching at the tertiary level, and leveraging available technology to support local practices. Methodologically, using multiple context-specific instruments and methods is

recommended to gain insights into teachers' underlying beliefs and perspectives about technology-mediated teaching.

Furthermore, Kazoka and William (2016) have attempted to investigate teachers' level of knowledge regarding the use of ICT in teaching and learning and examine their actual practice of incorporating ICT in the classroom. This study has employed interview protocols, discussions, and practical observations as instruments for data collection. The findings have revealed that many secondary school teachers lacked sufficient knowledge and familiarity with utilizing ICT facilities in the teaching and learning process. Despite a few ICT facilities in the schools visited, they were inadequate considering the number of teachers and students. Based on the results, the study concludes that achieving effective integration of ICT in the teaching and learning process in Tanzanian secondary schools requires collaborative efforts among various education stakeholders, including the Government, schools, teachers, and parents.

Ghavifekr et al. (2016) have aimed to examine teachers' perspectives on the challenges faced when incorporating ICT tools in classrooms. They adopted a quantitative research approach using a questionnaire as their research instrument. The researchers have employed descriptive analysis to examine the frequency and percentage of the population in the demographic background. Additionally, they have utilized mean, standard deviation, frequency, and percentage to analyze the research findings. The study has identified key issues and challenges perceived by teachers when using ICT tools, including limited accessibility, inadequate training, time constraints, network connectivity issues, insufficient technical support, and a lack of teachers' proficiency in using such tools. Furthermore, the results from the t-test

indicated that male teachers tended to use ICT tools more frequently in the classroom than their female counterparts.

Along the same line, Jatileni and Jatileni (2018) have focused their study on the perception of Namibian primary school teachers towards using ICT. It has found a positive perception of using ICT in teaching and learning. However, there are challenges to integrating ICT in education, such as lack of access to devices and connectivity, as well as teacher training. The study also found that male teachers are more likely to use ICT in their classrooms than female teachers.

Similarly, Al Harbi (2014) has attempted to explore how Saudi high school teachers have effectively implemented ICT into their classroom practices and describe Saudi high school teachers' level of TPACK (technological pedagogical and content knowledge). To achieve these goals, the study has applied a sequential mixed methods design by using quantitative questionnaires and qualitative interviews with Saudi high school teachers in the Al-Madinah administrative area of Saudi Arabia. Findings from both questionnaires and interview data revealed that Saudi high school teachers demonstrated low effectiveness in ICT implementation. Moreover, the participating teachers appeared to have low to moderate levels of TPACK knowledge. Teachers' TPACK knowledge was found to be the best predictor of the effectiveness of ICT implementation.

Further analysis of the interview data indicated that the low level of ICT implementation was linked to several barriers. These barriers included the lack of ICT resources, unavailability of ICT policy and planning including monitoring, evaluating, and motivation process, limited ICT knowledge and need for professional development, lack of time, and lack of technical support and maintenance. Based on

these findings, implications for practice and further research relevant to ICT implementation are discussed.

Laudari's (2019) study presents a qualitative case analysis focusing on the digital practices of teachers in two Nepalese universities. The research investigates the factors influencing the adoption of technology by teachers, the process of acquiring digital competencies, and the consequent enhancement of their teaching methodologies. The study, conducted between late 2016 and mid-2017, encompasses 25 teachers engaged in BEd and MEd courses. It also involves interviews with policymakers and focus group discussions with pre-service teachers.

The study employs Activity Theory as a framework for analysis, revealing that despite challenges posed by institutional and broader contexts, teacher teachers actively pursue learning opportunities to enrich their digital skills. This proactive approach leads to integrating digital tools into their teaching practices. Although classroom utilization of technology may be restricted, teachers effectively employ digital platforms beyond the classroom to sustain discourse and engage students. Remarkably, the cultivation of these digital competencies triggers substantial shifts in pedagogical approaches.

The study's significance is underscored by its valuable insights into the motivations driving technology adoption among teacher teachers, the process of skill refinement, the pivotal role of continuous learning in technology integration, and the resultant transformative changes in pedagogy. Furthermore, the research extends our understanding of Activity Theory's applicability in examining digital practices while also shedding light on policy implications surrounding the use of technology in teacher education

Simuja (2018) conducted a study that investigates the involvement of learners and communities in socially conscious ICT education within rural secondary schools. The primary objective is twofold: to critically assess the current practices of ICT

education in these schools and to propose alternative strategies that would enhance the transformative nature of ICT education while aligning it with the developmental needs of the communities.

The training program implemented was designed to motivate participants to share their individually defined perceptions and knowledge related to ICT education. Employing a theoretical framework rooted in Foucault's philosophy regarding power-knowledge dynamics, the study investigates the intricate interactions between ICT education practices, the core life experiences of learners, and the collective values and ideals within rural communities.

The findings of the research underscore the presence of ingrained ideologies within existing ICT education practices in rural secondary schools. These ideologies influence various aspects, such as learners' sense of self, social interactions, power dynamics, and their understanding of the meaningful application of ICTs in community development.

The significance of this study lies in its capacity to showcase innovative approaches that reimagine ICT education with a focus on transformation. More precisely, the study advocates for reevaluating the role of power, identity, ownership, and social experiences in shaping ICT education practices. By doing so, learners can be empowered to develop a profound and transformative perspective of themselves and their surroundings.

Toktarova and Semenova (2020) conducted a study focusing on the current digitalization of teacher education within Russian universities. Their research examined various terms such as 'digital pedagogy,' 'electronic pedagogy,' 'virtual pedagogy,' and 'techno-pedagogy,' aiming to understand their definitions and implications. The authors employed methods like content analysis, discursive analysis, and synthesis of contemporary digital technology concepts to explore the functional and content-related aspects of digital pedagogy. Through their

investigation, they identified key characteristics of digital pedagogy, encompassing components related to content, environment, technology, and competencies.

The article highlights the importance of integrating digital transformation into education, which involves devising unconventional approaches to address traditional pedagogical challenges. This includes establishing and advancing innovative learning processes rooted in artificial intelligence, big data, and distributed computation. The study highlights the necessity of restructuring educational systems to effectively leverage digital pedagogy's potential. This restructuring aims to equip modern students with the skills and knowledge needed to excel in professional endeavors within the digital economy and navigate life within a digital society.

Paudel (2020) conducted a research study to explore how ICTs are integrated into English Language Teaching and Learning (ELTAL) activities within the secondary school education context in Nepal. The primary objective was to analyze how both teachers and students utilize ICTs in teaching and learning English language skills, as well as in accessing information and engaging in collaborative learning in ELTAL. The study also aimed to identify the opportunities and challenges associated with incorporating ICTs into ELTAL. The research approach adopted for this study was constructivism, utilizing a qualitative design and employing a multiple case study strategy.

The researcher used a triangulation approach to gather comprehensive data, combining qualitative and quantitative data collection methods. These methods included observations, interviews, focus group discussions (FGD), questionnaires, and document reviews. The data was analyzed using inductive thematic analysis and descriptive statistics. Analytic techniques such as within-case analysis, cross-case analysis, and pattern-matching were used to derive conclusions.

The study's findings indicated that ICTs were supportive of both teachers' and students' EL teaching and learning processes. They facilitated access to learning resources and collaborative activities within ELTAL. Teachers used ICTs to stay

updated, prepare lessons, and deliver presentations. Similarly, students benefited from ICT tools by increasing their exposure to English, accessing learning resources, and making information sharing more efficient during distributed collaborative activities.

However, the study also highlighted certain challenges. Students lacked confidence in using ELS-specific websites, and teachers played a more dominant role in controlling students' access to information. Collaborative activities focused on enhancing students' communication skills rather than higher-order thinking skills. Additionally, teachers expressed dissatisfaction with the advantages of ICTs, and students did not consider ICTs to be "extremely useful" enough to use them consistently in ELTAL activities. This was attributed to challenges such as poor ICT infrastructure and insufficient technological pedagogical knowledge.

This study shed light on the integration of ICTs in ELTAL within the context of secondary schools in Nepal. It revealed that while ICTs supported ELS teaching and learning, there were challenges to their effective implementation due to infrastructural limitations and pedagogical shortcomings. The study aimed to provide valuable insights for stakeholders involved in incorporating ICTs into ELTAL

In this way, the study made in and abroad basically focuses on the use of ICT in English language teaching and learning areas which gives an insight to find out the implications and research gap for the study.

Implications of the Review of the Literature

An extensive examination of existing conceptual and theoretical literature on the use of ICT in English language teaching as mentioned, discussed, and studied by Becta (2004), Kothari (2004), Hartoyo (2008), Shields (2011), Rana (2018), Acharya (2014), Pandit (2013), Coolican (2013), Kothari (2004), and Richard (2006). They also show that ICT in English language teaching is a researchable topic/area.

Furthermore, I have thematically analyzed these sources and deduced the implications of this review for my study. It gives me explicit conceptual and theoretical insight for my study.

Similarly, the review of various thesis/dissertations and research articles such as Cosgun and Savaş (2019), Rahman (2015), Rana et al. (2022), Kazoka and William (2016), Al Harbi (2014), Wujiabudula (2018) and so on also provide me conceptual, theoretical, methodological insights for my study. It also helped me find my research gap and the area to be studied. Furthermore, the methodologies described by Kothari (2004), Creswell (2014), and Creswell and Plano Clark (2018) have given me insights into methodological guidelines.

In conclusion, the intensive and extensive study of various literatures helped get the concept of the topic, familiarized me with the areas of study, made me aware of theoretical and methodological outlines, and helped me find the research gap that made this research possible.

Research Gap

While there are several studies on the use of ICT in ELT classrooms, there are notable gaps in the literature. Previous studies, such as Rana (2018), focused on teachers' perceptions of ICT use in rural areas of Nepal, and Rana et al. (2022) examined teachers' experiences with ICT training. Likewise, Paudel (2020) explored integrating ICT in secondary-level ELT in Nepal, while Suwannasom (2010) investigated the use of technology in English language teaching more broadly. In addition, Cosgun and Savaş (2019) studied ICT use in self-directed professional development, and research by Wujiabudula (2018) and Kazoka and William (2016) examined school teachers' ICT knowledge levels.

Similarly, Rahman (2015) and Yunus et al. (2009) focused on technology use in English language classrooms and ICT in learning English, respectively. Ghavifekr et al. (2016) addressed on challenges faced by teachers in using ICT and Jatileni and Jatileni (2018) explored perceptions towards ICT use in Namibia. Moreover, Al Harbi (2014) studied ICT use in classrooms in Saudi Arabia, while Laudari (2019)

examined ICT use at the university level in Nepal. Additionally, Toktarova and Semenova (2020) discussed the digitalization of teacher education at the university level. However, none of these studies comprehensively cover the combined aspects of knowledge, perception, and practical use of ICT in ELT classrooms, creating a significant gap that this research aims to address.

Furthermore, the existing literature has not adequately addressed the specific context of remote areas in Nepal, such as the Sudurpaschim Province. Most of the above-mentioned studies have focused on qualitative research approaches, whereas this study employs a mixed-methods design, thereby addressing the gap in research methodology. The literature often covers small sample sizes due to the qualitative nature of the research; in contrast, this study uses a representative sample size, addressing the need for more generalizable findings. Additionally, while thematic analysis is commonly used in existing research, this study incorporates both descriptive and inferential statistics, filling a gap in data analysis techniques.

This research also introduces new dimensions by comparing results based on variables such as geographical location, qualification, experience, employment status, access to digital devices, and ICT training status, providing fresh insights that differ from existing studies. Through interviews and observations, this study will generate comprehensive results, fulfilling the knowledge gap and contributing significantly to the understanding of ICT integration in ELT classrooms in remote areas of Nepal.

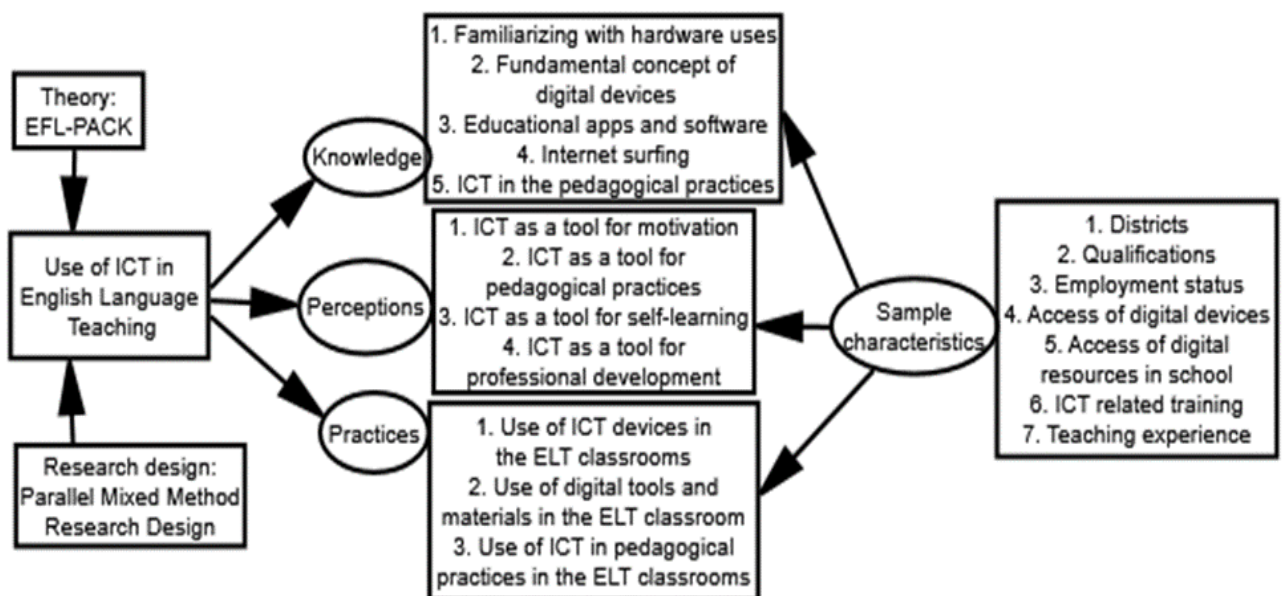
Conceptual Framework

A Conceptual Framework is a plan or frame for the whole research process on which the study is established. It provides a general picture of the study from which the readers can conceptualize the whole idea in a single glimpse. Regarding my study, the main focus is on investigating secondary-level English language teachers' knowledge, perceptions, and practices with sub-dimensions and sample characteristics

regarding the use of ICT in the classrooms. Therefore, theories related to ICT, ELT, and learning theory have been associated with the study. Specifically, the study is guided by the philosophy of English language teaching coupled with TPACK, i.e., EFL-TPACK. I have adopted the convergent parallel research design in the mixed method, employing class observation, questionnaires, and interviews. Here, the secondary-level English language teachers from Kailali, Achham, and Bajhang, representing terrain, mountain, and Himalayan regions, are the informants/participants of my study. The data have been analyzed and discussed based on the teachers' level of knowledge of ICT, their perceptions of ICT use, and their practices of ICT in English language classrooms as illustrated in the following figure;

Figure 3

Conceptual Framework



Chapter Summary

This chapter reviews the conceptual, theoretical, and empirical literature related to the integration of ICT in English language teaching. It begins by examining the conceptualization of ICT, and exploring how it is defined and understood within the educational context. The chapter then researches investigations of teachers'

perceptions and practices regarding the use of ICT, drawing on various studies to highlight common themes and divergences in how educators approach technology in the classroom. Additionally, it surveys relevant empirical studies to provide a broad understanding of the current state of research in this area.

By identifying gaps in existing research, the chapter highlights the study's implications for further exploration. It constructs a clear conceptual framework, incorporating insights from the literature review to guide the investigation into teachers' knowledge, perceptions, and practices of ICT in English language teaching. Ultimately, this comprehensive review highlights the study's significance in the educational and technological landscape, emphasizing the need for continued exploration and innovation in the use of ICT in language education.

Chapter Three

Research Methodology

This chapter presents the comprehensive research methodology and outlines the procedural framework included in this study. It provides research philosophy, an in-depth exploration of the research design, research site, and data sources for both quantitative and qualitative research designs, as well as the population and sample. Additionally, it explains the sampling strategy and procedure, research tools/instruments, the details of data collection and analysis, the establishment of study reliability and validity, and the ethical considerations that have been accurately integrated.

Pragmatism as the Research Paradigm

The term "paradigm" represents the philosophical assumptions that guide researchers' worldviews and actions (Lincoln et al., 2011). The "worldview" is synonymous with "paradigm" and is described as a lens for comprehending the complexities of the real world (Patton, 2002). A paradigm is defined by Riazi and Candlin (2014) as a belief system that informs research designs. Lincoln and Guba (1985) consider it a fundamental belief system guiding methodological choices. Morgan (2007) highlights the paradigm's different meanings, referencing it as a worldview, an epistemological stance, shared beliefs within a research field, and model examples of research.

Pragmatism develops as a common philosophical foundation for mixed research (Biddle & Schafft, 2015; Hall, 2013). In this context, various paradigms have been suggested to emphasize the mixed research approach, including paradigmatic stance, multiple paradigm approach, and single paradigm approach (Barnes, 2019; Hall, 2013). Pragmatism, critical realism, transformative paradigm, dialectical

pluralism, postmodernism, feminism, and realism are among the proposed paradigms for mixed methods study (Barnes, 2019; Fetters & Molina-Azorin, 2017; Ghiara, 2020; Shannon-Baker, 2016). Therefore, I have adopted pragmatism as my research paradigm.

Pragmatism as a paradigm for mixed research includes practical and contextually responsive design decisions (Datta, 1997). In this research, pragmatism represents an approach that considers practicality and responsiveness as essential criteria for making design choices, aligning with the fundamental principles of pragmatism as a paradigm. It gives the researcher's worldview through intersubjectivity and pragmatically in such mixed methods research design.

Rationale for Pragmatism as the Paradigm

Pragmatism, recognized by Denscombe (2008) and Mitchell (2018) as the philosophical partner of mixed research, provides the foundational framework for integrating research methods (Knight & Johnson, 2007). This philosophy, approved by Creswell (2014), allows for integrating paradigms, assumptions, approaches, and methods for data collection and analysis. Pragmatism emphasizes the concept of "what works," central to its theory of truth, focusing on practical problem-solving in real-world contexts (Creswell, 2014; Hall, 2013; Shannon-Baker, 2016).

In this context, I systematically arrange ontological, epistemological, and axiological stances of pragmatism, bringing together quantitative and qualitative paradigms to form an integrated perspective. This paradigm presents various options, making it the most excellent choice among various research philosophies. The convergent parallel research design represents this pragmatic and pluralistic approach, integrating qualitative and quantitative methods to achieve a comprehensive

understanding of the research question, effectively addressing limitations while capitalizing on the strengths inherent in each method.

From an ontological standpoint, pragmatism includes "inter subjectivity," recognizing the coexistence of subjective and objective perspectives within reality (Saunders et al., 2009). This perspective supports researchers' recognition of multiple valid viewpoints, illustrating different aspects of the research question (Johnson & Christensen, 2019). Pragmatism captures the complexity of reality, acknowledging its dynamic nature shaped by human actions and interactions.

In epistemology, a pragmatic researcher selects methods based on their practical value to fulfill research objectives, reflecting the "double-faced knowledge" stance (Ma, 2012). This approach facilitates the utilization of suitable methods to attain research goals, establishing a link between ontological and epistemological pragmatism. The epistemological orientation of a convergent parallel design is defined by an eclectic or integrative approach, utilizing qualitative methods to explore context and complexity while employing quantitative methods for generalizability and statistical analysis.

Axiologically, a pragmatic researcher introduces bias only as necessary to improve research, holding to the "necessary bias principle" (Saunders & Thornhill, 2011). This principle recognizes that all research decisions are influenced by researchers' values, emphasizing the inseparable connection between researcher values and the research process. The axiological orientation within a convergent parallel design is typically either value-neutral or value-pluralistic, seeking objectivity while integrating both qualitative and quantitative methods to improve the overall quality of the research.

In constructing methodology, qualitative methods, such as interviews, observations, and document analysis, and mixed methods, like surveys, experiments, and case studies, are preferred. The development of mixed-method methodology has transformed social science research, offering innovative approaches to solving research problems. Along with this progression, pragmatism involves the sequential integration of qualitative and quantitative methodologies.

This study accepts pragmatism's ontological, epistemological, and axiological stances that harmonize quantitative and qualitative paradigms into a cohesive framework. The reality cycle recognizes the presence of a singular reality, with secondary-level English language teachers holding various perceptions regarding the use of ICT in their classes. Double-faced knowledge suggests that any knowledge can be perceived as either observable or unobservable, depending on the researcher's ontological stance. The principle of necessary bias allows for the purposeful introduction of bias to improve the research objectives. The comprehensive perspective of pragmatism views knowledge as socially constructed and reality as flexible, advocating for inclusive research design and collaboration. Prioritizing practical application, pragmatism adopts problem-solving and knowledge-sharing to benefit current and future generations.

Convergent Parallel Mixed Methods Research Design

The research objective focuses on investigating teachers' knowledge, perceptions, and practices regarding the use of ICT in English language classrooms. A hybrid research design known as the convergent parallel design has been adopted to address this objective. This design combines qualitative and quantitative approaches within the framework of mixed methods research. The convergent parallel design involves simultaneous data collection and analysis of quantitative and qualitative

strands, which are then integrated to form a comprehensive discussion (Creswell & Plano Clark, 2018). This integration occurs at various stages, including design, analysis, and reporting.

Quantitative data provide insights into teachers' knowledge, perceptions, and practices regarding the use of ICT in English language classes, while qualitative data offer depth and context to the findings. By combining both approaches, a more comprehensive understanding of the research topic is achieved, and a better understanding of either approach could be provided individually. Integration is facilitated through joint displays, data transformation, and narration, allowing the synthesis of quantitative and qualitative data (Fetter & Molina-Azorin, 2017).

This mixed methods approach goes beyond the traditional division between quantitative and qualitative research, providing a more holistic perspective. This continuous relationship between methods enables triangulation complementarily and the expansion of research findings. Furthermore, the research process involves concurrently conducting quantitative and qualitative elements, collecting and independently analyzing data from both strands and subsequently integrating the results to develop validity. This process is symbolically represented as the convergence of qualitative and quantitative insights (Morse, 1991). Integrating both data sets allows for a comprehensive understanding that goes beyond the insights of individual approaches (Creswell & Plano Clark, 2018).

Furthermore, it reinforces credibility by presenting harmonious findings and utilizing qualitative insights to clarify unexpected quantitative outcomes. It also triangulates the data by involving different teachers through questionnaires, interviews, and observations combined with existing literature. Methodological

triangulation including quantitative and qualitative methods, further supports the study's reliability.

Figure 4

Convergent Parallel Mixed Methods Research Design



Adapted From Creswell and Plano Clark (2011)

Figure 4 describes the Convergent Parallel Mixed Methods Research Design, illustrating the simultaneous collection and analysis of quantitative and qualitative data. This integrated approach contributes to a more advanced understanding of teachers' attitudes, motivations, and practices related to ICT use in English language classrooms.

Moreover, the recognition of the mixed methods research design as a distinct methodological movement has grown significantly in recent years (Biddle & Schafft, 2015; Cameron, 2011; Hall, 2013; Ma, 2012; Molina-Azorin, 2016). In this context, quantitative and qualitative approaches are not opposites but represent points along a continuum (Creswell, 2014; Johnson & Onwuegbuzie, 2004). The mixed research approach involves incorporating both quantitative and qualitative methods, either concurrently or sequentially (Antwi & Hamza, 2015; Johnson & Christensen, 2019; Ma, 2012; Molina-Azorin, 2016). Furthermore, selecting methods determines their sequence in the research design (Molina-Azorin, 2016). A fundamental principle of mixed research is that integrating these methods provides a more comprehensive

understanding of research problems than using a singular approach. (Creswell, 2014; Molina-Azorin, 2016).

The core mixed methods research designs, i.e., convergent parallel research design, explanatory sequential research design, and exploratory sequential research design, exist within the mixed research approach. The "convergent parallel mixed method" design involves the simultaneous collection of quantitative and qualitative data, which are then integrated to form a comprehensive analysis of the research problem (Barnes, 2019; Creswell, 2014). This design includes the "concurrent triangulation design," which employs two methods to support findings, and the "concurrent nested design," where one method serves a distinct purpose, such as addressing a separate research question or focusing on a subgroup within a larger group (Barnes, 2019). This approach is valued for complementing strengths, achieving triangulation, and developing understanding.

In conclusion, the convergent parallel mixed methods research design effectively merges quantitative and qualitative approaches to explore teachers' ICT practices in English language classes comprehensively. Data integration through triangulation enhances findings, ensuring a rigorous foundation for evidence-based recommendations in educational practices and policies that align with the research objective.

The Rationale of the Convergent Mixed Methods Research Design

The formulation of research questions often originates from the problem statement, guiding ensuing choices in methodology (Creswell & Plano Clark, 2018). In addressing methodological and knowledge gaps related to ICT usage in English language classrooms, this study is required to correct incomplete perceptions and practices described by the literature. A mixed methods design was chosen to address

these issues as it aligns with the principles of triangulation, complementarity, and expansion, resulting in a more comprehensive analysis (Greene et al., 1989). This approach facilitates convergent and divergent insights, enabling a comprehensive exploration of "what works and how" (Creswell & Plano Clark, 2018).

The convergent parallel mixed methods design was especially appropriate for this study. It combines quantitative and qualitative methodologies' strengths while addressing their weaknesses. The quantitative component supports generalization, while the qualitative component explores deeper understanding and contextual factors. This approach enhances the validity and reliability of the research (Johnson & Onwuegbuzie, 2004).

Rigorous considerations for trustworthiness were integrated into this mixed methods analysis. Legitimization, as outlined by Onwuegbuzie and Johnson (2006), played a role through strategies such as sample integration, minimizing weaknesses, and paradigmatic mixing. Combining inferences was made possible by employing the same sample for both quantitative and qualitative strands. Weaknesses in one strand were counterbalanced by strengths in another, ensuring a comprehensive approach to data collection. Paradigmatic shifts between post-positivism and constructivism were embraced, contributing to the overall trustworthiness of the findings (Creswell & Plano Clark, 2018).

Qualitative and quantitative data integration occurs during the data analysis and interpretation phase. This merging process improves the depth and breadth of understanding, offering a more comprehensive view of research questions from multiple perspectives. Triangulation, a foundation of mixed methods research, involves using multiple sources or methods to support the credibility of findings

(Carter et al., 2019). Using both approaches, researchers can overcome challenges and achieve more insights into complex research phenomena.

Integrating quantitative and qualitative data is particularly relevant in addressing different research problems. This strategy facilitates an in-depth and expansive analysis, with both aspects complementing each other and contributing to the overall enrichment of the conclusions. Combining these two methodologies offers a holistic understanding that extends beyond the limitations of either method. Moreover, mixed methods research bridges the epistemological gaps between quantitative and qualitative paradigms, providing a more comprehensive understanding of research phenomena.

Considering the specific context of this study—investigating ICT use in English Language Teaching classrooms—a mixed methods approach is highly suitable. This design captures teachers' knowledge, perceptions, and practices by combining quantitative data on ICT knowledge and practices with qualitative perceptions into teachers' experiences and motivations. Integrating both approaches facilitates triangulation, resulting in a more systematic understanding of the topic. Additionally, the mixed methods design allows for evidence-based recommendations, making a valuable contribution to educational practice and policy decisions.

Selecting Research Sites, Study Groups, and Constructing Instruments

When developing this study within a convergent parallel mixed methods research design framework, I purposefully selected appropriate research sites, defined the study population for both quantitative and qualitative strands, and carefully designed research instruments to gather comprehensive data. The following sections present a comprehensive overview of these foundational decisions.

Research Site

The research site refers to the physical context where data is collected. For this study, the researcher purposefully selected community schools across three different districts within the Sudurpaschim Province. The reason for making this choice is grounded in the representation that these community schools provide to the broader educational area of Nepal. The three chosen districts—Kailali, Achham, and Bajhang—further signify varied geographical regions: the Tarai, hill, and mountain. The selection of these specific districts was influenced by both the proximity and accessibility of my research base and the relevance of these regions to the study's objectives. Due to my established presence in this region, accessing data was made more appropriate.

Study Group

The study group, which included participants in this research, comprised English language teachers at the secondary level (teaching classes 9 and 10) from the three designated districts: Kailali, Achham, and Bajhang. By including these districts, each representing distinct geographical characteristics, the study aimed to summarize the diversity of Sudurpaschim Province. The participant list was obtained through collaboration with the respective Education Development and Coordination Unit (EDCU) and the Nepal English Language Teachers' Association (NELTA) of their respective districts. Based on the official record of EDCUs and NELTA branches of three districts, there were 161 schools in Kailali, 93 in Achham, and 79 in Bajhang district in 2020. In total, there were 333 schools in three districts, and on average, one English teacher is available in each school, according to the rules of the government. Hence, the total number of English teachers at 333 schools was considered the research population.

Sample and Sampling Techniques

The target population of the research was the total English teachers of 333 schools; hence, the appropriate sample size for the study was by taking a 95% confidence interval, 5% margin of error, and 50% population proportion (<https://www.calculator.net/sample-size-calculator.html>). However, by adding a 20% nonresponse error as 36 teachers, the required sample size was 215. The contact information of all schools was taken from respective EDCUs. The researcher contacted all head teachers through their contact numbers. However, out of 333 schools, only 305 head teachers were in contact during data collection in March–May 2020. The researcher found 249 English teachers with their contact details in 305 schools by the contact with Head Master. After collecting the contact information of the English teacher, the link to Google Form was shared with all 249 English teachers by email and message during this same time. However, during the data collection period of three months, 228 respondents participated in the research; because of some non-response errors in some items and outlier issues, six respondents were excluded from the research. Hence, 222 respondents were the accurate sample size used in this study. The data were collected based on the list of teachers, i.e., list-based sampling (Fricker, 2017; Glazunov et al., 2012; Schonlau et al., 2002) technique was applied in the research.

Participants' Selection for Qualitative Study. For the qualitative strand, participants were strategically chosen through purposive sampling. Six teachers were selected from the pool of quantitative study informants, with two participants from each of the three districts. These selections were made based on accessibility, availability, locality, and inclination to participate in class observations and interviews. The aim was to ensure diversity in perspectives, with maximum variation

sampling utilized to improve the trustworthiness of qualitative data. This methodological approach seeks patterns within a range of participants who represent various characteristics (Merriam & Tisdell, 2015).

Demography of the Informants/Participants

As this study was a convergent mixed method, the researcher employed different sets of population samples for quantitative and qualitative studies.

Demography of the Informants in the Quantitative Design

For the quantitative study, the researcher took a total of 222 English language teachers from the sites, i.e., Achham, Bajhang, and Kailali, including diversities in their geographies, qualifications, experience, employment status, having digital devices, availability of digital devices in the school, and training status through the random sample.

Table 1

Socio-Demographic Characteristics (n=222)

Socio-demographic characteristics	Categories	Frequency	Percentage
Districts	Achham	71	32.0
	Bajhang	67	30.2
	Kailali	84	37.8
Qualification	Bachelor	47	21.2
	Master/MPhil	175	78.8
Experience	Less than 5	34	15.3

	years		
	5 - 10 years	97	43.7
	11 - 15 years	44	19.8
	More than 16	47	21.2
	years		
Employment Status			
	Permanent	73	32.9
	Temporary	149	67.1
Having digital devices			
	No	82	36.9
	Yes	140	63.1
Availability of digital resources in school			
	Poor	40	18.0
	Moderate	81	36.5
	Good	93	41.9
	Very good	8	3.6
Training status			
	No	129	58.1
	Yes	93	41.9

Table 1 shows that the number of participants was from three districts—Kailali (32%), Achham (30.2%), and Bajhang (37.8%). Concerning sex, 98% were males, and only 2% were females. Under the qualification heading, only 21.2% of participants had a bachelor's degree, and 78.8% had a Master's/MPhil qualification. Regarding the experience, only 15.3% had less than five years of experience, 43.7% had 5-10 years of experience, 19.8% had 11-15 years of experience, and 21.2% had more than 15 years of experience. Around two-thirds (67.1%) of the participants had

temporary and one-third (32.9%) had permanent jobs. Around two-thirds (63.1%) of participants had digital devices, and more than one-third (36.9%) did not have any digital devices. In contrast, digital devices represented laptops in this study. Around one-fifth (18%) of the schools had poor conditions for digital resources; whereas the rate was only 3.6% under very good conditions and 41.9% of institutions had good conditions. Additionally, the teachers who took any ICT-related training were only 41.9%, whereas 58.1% of them did not take any training.

Demography of the Participants in Qualitative Design

Regarding the qualitative data, only six participants were chosen from these districts (i.e., two from one district) via purposeful sampling. They are pseudonyms in the study.

Table 2

Demography of Participants(n=6)

District	Participants	For qualitative data		
		School	Participant name	Qualification
Kailali	2	A	Harish	Bachelor
		B	Ramesh	Master
Achham	2	C	Rita	Master
		D	Shambhu	Master
Bajhang	2	E	Umesh	Master
		F	Gita	Master

Table 2 presents the demography of the participants for the qualitative data analysis. There are six participants representing three districts of Sudurpaschim Province.

Profile of Participants

The participants who were involved in the interview and class observations were from three districts such as Kailali, Achham, and Bajhang. Interview Time from March to May 2020 (They are pseudonyms)

Mr. Harish (Kailali)

Harish Shresth is a dedicated English teacher with 18 years of experience at the secondary level in Kailali, specifically teaching classes 9 and 10. He is 45 years old. Embracing Information and Communication Technology (ICT) in education, Harish utilizes a variety of digital tools such as laptops, desktops, and smartphones to enrich the learning experience. These tools facilitate interactive activities, multimedia presentations, and real-world examples, enhancing student engagement and comprehension. Harish believes in the transformative power of ICT to provide up-to-date resources, personalized learning experiences, and immediate feedback, thereby fostering critical thinking and problem-solving skills among students.

Mr. Ramesh (Kailali)

Ramesh is an English teacher with 30 years of experience, currently teaching at a Secondary School in Kailali. He is 52 years old. He has a strong teaching philosophy that emphasizes the importance of ICT tools in making learning more enjoyable, engaging, and effective. He has been using a range of digital devices and ICT tools, including multimedia projectors, laptops, desktops, mobile phones, and the internet, to teach language aspects and literature

Mrs. Rita (Achham)

Rita, a 42-year English teacher from the mountainous region of Sudurpaschim province in Achham district, has spent her life rooted in the community where she grew up. With 14 years of teaching experience, Rita teaches classes 9 and 10, motivated to provide a comprehensive learning experience for her students. Despite her limited knowledge of digital devices, she recognizes the importance of technology in modern education and the need to bridge the gap in understanding science and technology. Educated in local schools, Rita completed her schooling and college life without ever encountering ICT. After university, she embarked on her teaching career

using traditional methods, relying on chalk and duster. Rita's initial approach to education was conventional, focusing on traditional materials.

Mr. Shambhu (Achham)

Mr. Shambhu is an English teacher in Achham, with a career in secondary education crossing since 2069 B.S. (2012 A.D.). He primarily teaches English to classes 11 and 12. Shambhu has a clear understanding of digital devices and their importance in modern education. He defines digital devices as technologies used to transmit, process, store, create, display, share, or exchange information electronically. Although his school management has not prioritized digital tools, Shambhu makes effective use of the available computer and his mobile phone to prepare and present teaching materials, enhancing the learning experience through PowerPoint presentations and overhead projectors.

Mrs. Gita (Bajhang)

Gita has been an English teacher at the secondary level since the 2066 B.S. in Bajhang district. She is 49 years old. She has been teaching English in classes 8, 9, and 10 since 2066 B.S. She had been educated at a community school of Bhajang where she did not encounter any sort of ICT device. After many years of her career, she came to know about ICT literally. She first encounters the mobile phone. Despite having limited knowledge of digital devices, she recognizes the significance of technology in modern education.

Mr. Umesh (Bajhang)

Umesh is an experienced English teacher from Bajhang, he has been teaching English at the secondary level for 14 years, specifically focusing on Grades 9 and 10. Umesh has a comprehensive understanding of digital devices, including desktops, laptops, and smartphones, which he incorporates into his teaching to enhance the

learning experience. Despite the limited availability of these tools at his school, he motivates his students by showing videos, PPT slides, and other materials that inspire creativity and engagement.

Sources of Data

Primary and secondary/peripheral sources of data were collected to make this study rich, reliable, and valid. The primary data sources included 222 secondary English language teachers from Kailali, Achham, and Bajhang, as well as six of them specifically for qualitative perspective. Additionally, the research utilized ICT-related books, journal articles, dissertations, and policy documents to provide a comprehensive contextual foundation.

Data Collection Procedures

The data collection process was carefully coordinated to integrate quantitative and qualitative research tools, ensuring a comprehensive exploration of the research objectives.

Quantitative Data Collection Procedures

The specific collection of quantitative data involved a group of 222 teachers from different districts within Sudurpaschim Province. This process included distributing carefully designed questionnaires through both electronic and physical methods. To promote active involvement, participants were given a three-week timeframe to respond. In addition, regular communication via phone calls was employed to inform, confirm, and encourage participants in fulfilling their crucial roles.

Gathering responses from a context characterized by different geographical and developmental attributes presented unique challenges. Involving participants from

regions with varying development levels demanded resourceful strategies and dedicated efforts to ensure the comprehensiveness of quantitative data.

Qualitative Data Collection Procedures

For qualitative perspectives, a purposive approach was employed to select six participants from the larger group of 222. The selection process was guided by availability, accessibility, and enthusiasm for participation. Developing a rapport through phone and face-to-face interactions established the foundation for the following steps. These included on-site visits to schools across Achham, Bajhang, and Kailali, regions with different geographic characteristics.

The foundation was established through open discussions clarifying the purpose of the study, the objectives of the school visits, and the confidentiality guarantee. With a shared understanding, classroom observations were conducted accurately, taking details based on observation guidelines. Following these observations, in-depth interviews were conducted in Nepali, encouraging open exchanges within the school premises.

Instrumentation

In this study's context of the convergent parallel research model, simultaneous integration of quantitative and qualitative research designs was implemented. This methodological approach required the use of distinct data collection tools to address the research objectives thoroughly. The research instruments included questionnaires, class observation guidelines, and interview guidelines supplemented by field diaries and reflective notes to increase the richness and accuracy of the gathered data.

Instruments for Quantitative Data Collection

A self-constructed instrument named “English Teachers’ ICT Using Scale” was employed in the research with three core dimensions as teachers’ knowledge,

perceptions, and practices towards using ICT in English language teaching at secondary schools in Nepal. The instrument consists of twelve sub-domains under three core domains. The total number of items in the instrument was 117. All items were on a five-point Likert scale measured from strongly disagree to agree strongly. The scale was measured from 1 for strongly disagree to 5 for strongly agree for positive items and reverse scoring for negative statements. The details of the dimensions of many items are presented in Table 3. The dimensions and sub-dimensions were developed based on the literature (Joshi et al., 2021) and experts' suggestions.

Table 3

Detail of Dimensions and Sub-Dimensions

Dimensions	Sub-dimensions	Number of items
Knowledge	Familiarizing with Hardware Usage	6
	Fundamental concept of digital devices	6
	Educational apps and software	12
	Internet surfing	8
	ICT in pedagogical practices	14
Perceptions	ICT as a tool for motivation	11
	ICT as a tool for pedagogical practices	12
	ICT as a tool for self-learning	7
	ICT as a tool for professional development	7
Practices	Use of ICT devices in the classroom	12
	Use of Digital tools and materials in the ELT classroom	14
	Use of ICT pedagogical practices in the ELT classroom	8

Questionnaires played a crucial role in the domain of quantitative research within the convergent parallel design. These surveys were carefully designed to cover

various question types, incorporating forced-choice and Likert-scale questions. They explored three main themes: teachers' knowledge, perceptions, and practices related to the integration of ICT in English language classrooms. Distributed among a group of 222 secondary-level English language teachers, these questionnaires required their responses, forming a quantitative basis for examining the current scenario of ICT integration in English language teaching.

Reliability and Validity of the Instrument. In the convergent parallel research design, the dynamic relationship between quantitative credibility and qualitative reliability underscored the importance of ensuring consistency in maintaining reliability and validity. Reliability was prepared through a series of strong strategies. The researcher's role transparency and careful documentation of research phases contributed to internal consistency (Lincoln & Guba, 1985). Triangulation, involving multiple data sources and participant perspectives, increased internal validity (Creswell & Plano Clark, 2018). A systematic record of decision-making and comprehensive documentation further increased the dependability of the research findings. (Lincoln & Guba, 1985).

The reliability of English Teachers' ICT Using Scale was ensured by Cronbatch's Alpha method. The value of Cronbatch's Alpha was greater than 0.70 (threshold), indicating that the instrument is reliable (Cohen et al., 2007; Creswell, 2014). The details of the reliability based on different dimensions are presented in Table 4.

Table 4*Reliability of the Tools*

Dimensions	Number of items	Number of participants	Cronbach's Alpha
Teachers' Level of Knowledge on ICT	45	50	0.96
Teachers' Perceptions on ICT	38	50	0.90
Teachers' practice of ICT English Language Classes	28	50	0.94
Total	111	150	0.94

Regarding validity, within the domain of quantitative research, ensuring trustworthiness centered around validity (Onwuegbuzie & Johnson, 2006), categorized by Shadish et al. (2002) into four dimensions: statistical conclusion validity, internal validity, construct validity, and external validity. Each dimension within the QUAN strand received careful attention. To establish statistical conclusion validity, which ensures accurate conclusions from data, comprehensive power analyses were carried out to establish significant statistical power (Wilder et al., 2019).

Content validity, which ensures the alignment of a measurement tool with its intended purpose, was rigorously pursued using Wilder et al.'s (2019) stakeholder survey validation procedures. In this research, the content validity was ensured by sharing instruments with ten experts in various fields; Education, English Education, ICT, and English teachers of school-level related expertise. The feedback from the experts includes language modification, some item exclusion, and the combination of some items with similar meanings. Additionally, the face validity (Abbas et al., 2019; Coolican, 2013; Shadfar & Malekmohammadi, 2013) was evaluated by the suggestion of English Education and ICT-related experts by which researcher determined the different dimensions and sub-dimensions

Both internal and external validity were maintained. Including diverse data sources and participant groups ensured internal validity (Creswell & Plano Clark, 2018). Integrating quantitative and qualitative data improved internal consistency and understanding (Creswell & Plano Clark, 2018). External validity, covering the generalizability of findings, was reinforced through transparent documentation of the researcher's role, participant profiles, and analytical methodologies (Creswell & Plano Clark, 2018). The study aimed to enhance the external validity of the findings by transparently explaining data collection and analysis procedures (Merriam, 1998).

The careful integration of reliability and validity principles emphasized the strength of the research design, producing credible, dependable, and widely applicable outcomes. The study's commitment to comprehensive approaches, simultaneous data collection, and equal emphasis on quantitative and qualitative data further strengthened its commitment to generating well-supported and broadly relevant findings.

Instruments for Qualitative Data Collection

In the qualitative dimension of this study, the foundation instruments were set by class observation guidelines and interview guidelines. Precisely, these tools were constructed to extract perspectives from six participants, each representing unique geographical regions—Kailali, Achham, and Bajhang. The qualitative methods employed, specifically interviews and class observations, are required to uncover the depth of teachers' knowledge, perceptions, and practices regarding the utilization of ICT. The interview guidelines were developed to prompt responses, contributing to a thorough qualitative analysis, while the class observation guidelines facilitated the exploration of classroom practices related to ICT integration.

Pilot Study and Instrument Refinement. The importance of reliable data collection tools is crucial in research activities. Mertens (2010) stresses the importance of researchers carefully choosing tools or methods for data collection, as these tools play a crucial role in gathering accurate and essential data that forms the basis for specific interpretation and informed decision-making. Consequently, a pilot study was conducted to improve and optimize the research instruments.

For example, a pilot study with five teachers near the research location (i.e., Achham) was conducted in the context of questionnaires. This preliminary phase revealed areas needing improvement, such as language clarity, question tally, scope coverage, and thematic depth. The following modifications were implemented based on the feedback received, resulting in improved questionnaires that are ready for deployment.

Similarly, the qualitative instruments conducted a parallel process of improvement. Class observation and interview guidelines were experimented with by two teachers, and their experiential feedback provided insights for refining the guidelines. The pilot study, thus, played a vital role in ensuring that the instruments used for data collection were aligned with the research objectives and capable of eliciting comprehensive responses.

In this way, the comprehensive approach to instrumentation within the convergent parallel research design facilitated the simultaneous collection of quantitative and qualitative data. By strategically utilizing questionnaires, class observation guidelines, and interview guidelines supported by thorough pilot testing, the study established a well-rounded data collection process. These instruments served as a bridge to extract various perspectives, contributing to an enriched analysis of the role of ICT in English language classrooms. This particular approach to data

collection highlights the study's commitment to methodological consistency and the pursuit of holistic findings. The English Teachers' ICT Using Scale conducted a pilot test among 50 secondary-level English language teachers.

Integration and Interpretation

The divergent data streams came together in some way during the analysis phase, with quantitative and qualitative data undergoing distinct examination. These two approaches facilitated a comprehensive understanding of the research area. Following integration and interpretation activities synthesized perspectives, resulting in a holistic interpretation. The dynamic interaction between data strands is visualized in Figure 5, taking the interplay of analysis and interpretation.

Figure 5

Data Analysis Procedures for Convergent Parallel Research Design



Adapted From Creswell and Plano Clark (2011)

This methodically detailed data collection effort highlights the rigorous methodology of the research. The detailed insights obtained through various techniques together contribute to a holistic comprehensive of the research subject.

Quantitative Data Analysis

In the quantitative data analysis aspect, the study explores teachers' knowledge, perceptions, and practices concerning ICT in English language classes through carefully designed questionnaires. This phase unfolded with a clear

quantitative perspective, employing deductive techniques to examine the collected data. Rigorous procedures were implemented to clean and refine the quantitative dataset, a crucial effort to maintain data integrity. Through precise tabulation, the data were organized to align with the research questions and the foundational principles of the study, ultimately providing insights into teachers' ICT knowledge, perceptions, and practices.

Frequency, percentage, mean, standard deviation (SD), independent sample t-test, analysis of variance (ANOVA), and correlation were major statistical techniques used in the research. Frequency and percentage were used to find the status of sample characteristics. Mean and SD were used to find the status of items, dimensions, and sub-dimensions. Moreover, three levels as high (mean score from 3.67 to 5.00), medium (mean score from 2.34 to 3.66), and low (mean score less than 2.34) were used to determine the level of items, dimensions, and sub-dimensions based on their mean score (Alharbi, 2014).

Independent sample t-test is used to find the significant difference between the mean score of the categorical variables having two categories. ANOVA is used in the same cases, which have more than two categories (2005; Creswell, 2014; Kothari, 2004). Since qualification, employment status, having digital devices, and training status are two categories the data was normally distributed based on. Hence, an independent sample t-test was used to test the significant differences in mean scores among their categories concerning all sub-dimensions under knowledge, perception, and use of ICT. Moreover, districts, experience, and availability of digital resources in schools have more than two categories. Hence, one-way ANOVA has been used to calculate significant differences in the mean score among their categories.

The data was cleaned by removing outliers and missing cases (excluding 6 respondents) before analysis. The assumptions of independent sample t-test and one-way ANOVA were tested before data analysis in this research. The general assumptions of independent sample t-test and one-way ANOVA are randomness and normality (Cohen et al., 2007; Creswell, 2014); hence, randomness property was ensured in the sampling technique, whereas normality was ensured by Kurtosis and Skewness. Kim (2013) suggested that the absolute value of skewness and kurtosis must be less than equal to 2 and 4, respectively, to determine normality. In contrast, the values of both skewness and kurtosis were found to be in the same interval in each case of all sub-dimensions (See Table 5). Hence, the condition of normality was also fulfilled by the data of this research.

Table 5

Detail of Sub-Dimension Wise Skewness and Kurtosis

Dimensions with respective sub-dimensions	Skewness	Kurtosis
Knowledge		
Familiarizing Hardware Usage	-0.09	-0.29
Fundamental concept of digital devices	0.09	0.00
Educational apps and software	-0.20	-0.79
Internet surfing	-0.39	-0.46
Pedagogical activities	-0.41	-0.78
Perception		
ICT as a tool for motivation	-1.24	0.92
ICT as a tool for pedagogical activities	-1.06	1.50
ICT as a tool for self-learning	-0.89	0.09
ICT as a tool for professional development	-1.10	0.47
Practices		
Use of ICT devices in the classroom	0.79	0.49
Use of teaching-learning tools and materials in the classroom	0.53	0.32
Use of ICT pedagogical practices	0.41	-0.15

Qualitative Data Analysis

Directing the terrain of qualitative data collection, the study addressed its core research questions by carefully using two distinctive sources: class observations and participant interviews. These two rich qualitative data sources were collected and later exposed to careful analysis.

For class observations, the researcher responsively documented ICT usage in English language classes through diary entries. The qualitative insights from participant interviews (in Nepali) were taken via audio recordings, later transcribed (in Nepali), and translated into English. An essential aspect of this qualitative phase was participant validation, whereby the transcribed interviews were provided to participants to corroborate their accuracy and lend consent for their utilization in the analytical journey.

The complicated qualitative data analysis process drew upon Nowell et al.'s (2017) thematic analysis framework. The phases included data familiarization, initial code generation, theme identification through quotation, comprehensive theme refinement, and precise theme definition, and concluded in a brief, logically coherent report. Following Braun and Clarke's (2006) approach, these steps were integral in producing a comprehensive narrative explaining the qualitative aspects of the research.

Merged Data Analysis Strategy

This study continues a holistic journey, where quantitative and qualitative data converged through Teddlie and Tashakkori's (2009) seven-step model. Beginning with data reduction and display, simultaneous data collection and analysis facilitated the initial phases. Progressing to data transformation and correlation, qualitative insights were translated into numerical codes, effectively connecting them with

quantitative data. Through data merging, a unique dataset emerged, resulting from the integration of qualitative and quantitative data.

Following data comparison, a dual qualitative and quantitative perspective was employed to differentiate connections. The increase of this process continued with data integration, indicating a unified merging of results. Correlations and a comprehensive combined table, appropriately represents in Table 6, harmoniously changed themes and quantitative findings, emphasizing the unified relationship between these data domains.

Table 6

Comparison Between the RQs, DAT, and Interpretation of the Results

Research objectives/questions	Data analysis techniques	How results were analyzed	How results were interpreted
To identify English language teachers' knowledge about ICT concerning their demographic characteristics.	Survey (questionnaires) Interviewing	Quantitatively Qualitatively	Mixed
To identify the perceptions of secondary-level English language teachers towards the use of ICTs in the classroom concerning their demographic characteristics.	Survey(questionnaires) Interviewing	Quantitatively Qualitatively	Mixed
To examine the practices of ICTs used in ELT classrooms in secondary level classrooms concerning their demographic characteristics.	Survey (questionnaires) Class observation	Quantitatively Qualitatively	Mixed

Note: RQs: Research Questions; DAT: Data Analysis Techniques

Here, demographic characteristics refer to their districts, qualifications, experience, employment status, having digital devices, availability of digital resources in school, and ICT training status of English teachers.

Quantitative and qualitative data were blended during the interpretation stage in this convergent parallel study design. This blending aimed to seek convergence, complementarity, and enhancement, aiming to develop a more comprehensive, valid, and practical comprehension of teachers' use of ICT (Creswell & Plano Clark, 2018). In this way, I collected and analyzed both data types simultaneously and then integrated them for a mixed analysis.

Qualities of Trustworthiness of the Qualitative Study

The credibility of qualitative research is best for its effectiveness. According to Firestone (1987), qualitative research should present findings in detail, enabling readers to perceive them as sensible and inconsistent with reality. This credibility is achieved through dimensions like credibility, transferability, dependability, and confirmability, as established by Lincoln and Guba (1985). These dimensions were specifically employed to ensure the accuracy of the qualitative component in this study.

Foundational to the research is credibility, ensuring that the data aligns with participants' perspectives and accurately reflects the reality under investigation (Merriam & Tisdell, 2015). Embedding qualitative questions within a quantitative survey raises a possible challenge, risking the loss of content richness and detail (Creswell & Plano Clark, 2018). Triangulation of data sources between the two qualitative databases was implemented to address this challenge, enhancing the depth of insights. Furthermore, member checking with interview participants added authenticity to the qualitative findings.

Transferability, or the extent to which findings can be applied to other contexts, was encouraged through strategic sampling techniques. Maximum variation sampling in follow-up interviews aimed to take a broad range of contexts and the reporting was oriented towards facilitating the application of findings to various settings.

Dependability, denoting consistency in the research process, was maintained through careful documentation and a record-keeping system. This approach offered transparency and traceability to decisions and conclusions. Confirmability concerning the alignment between data collection and analysis was encouraged through peer reviews of different research components, ensuring an unbiased and well-justified process.

Role of the Researcher

During my research effort, my role has been carefully defined to contribute to the data collection process as a questionnaire creator, an interviewer, and a supervisor all, while maintaining a stance of neutrality. My objective was to avoid any possible conflict of interest from influencing the participants' teaching-learning dynamics. This approach aligns with the principles of ethical research, where the primary concern is to gather data while preserving the natural environment and interactions within the educational context.

Drawing inspiration from Gold (1958), I implicitly played the role of an observer-as-participant during classroom observations. This approach enabled me to engage myself in the educational setting without disrupting its inherent dynamics. Throughout the data collection phase, participants were appropriately informed about my roles as a questionnaire developer, an observer during classes, and an interviewer.

This transparency was essential to establish rapport with the participants and follow the principles of informed consent.

During active involvement in the data collection process, I consistently maintained a neutral and impartial position. The objective was to minimize any possible bias or influence that could arise from my participation. This approach aligns with the principles of mixed methods research, where combining quantitative and qualitative data collection methods requires a careful balance to ensure the integrity of both data strands.

Following the mixed methods tradition, I outlined the procedures employed to integrate and harmonize the data collected through various methods. This included a comprehensive description of how the quantitative and qualitative data were collected, as well as the strategies employed for analyzing these various datasets. By transparently describing the data integration and analysis process, I intended to enhance the credibility and trustworthiness of the research findings.

The study participants were selected through a purposeful and systematic recruitment process to ensure diversity and representation. These participants were informed about the purpose of the study, their role in supplying data, and the various phases of data collection in which they would participate. This transparent communication was essential to support collaborative and informed engagement throughout the research.

In terms of study procedures, a well-structured plan was developed to guide the entire research process. This included describing the sequence of data collection activities, scheduling interviews and observations, and ensuring that ethical considerations were always supported. The structured study procedures provided a

clear roadmap for the research journey, facilitating smooth implementation and effective data collection management.

The data collection process included various methods, including surveys, interviews, and classroom observations. Each method was strategically chosen to take the research questions' quantitative and qualitative aspects. The integration of these methods was accurately planned to certify their complementarity and arrangement with the research objectives.

Moreover, the analysis phase of the research was conducted with methodological accuracy. Statistical analysis was applied to quantitative data to reveal patterns, trends, and correlations, while thematic analysis was employed on qualitative data to uncover refined insights and perspectives. Integrating these analytical approaches facilitated a comprehensive understanding of the research problem from multiple angles.

In mixed methods research, ensuring the legitimacy of the findings is important. To address this concern, considerations of consistency and trustworthiness were incorporated into the research design. The principles of sample integration, weakness minimization, and paradigmatic mixing is suggested by Onwuegbuzie and Johnson (2006). This involved using the same participant sample for both quantitative and qualitative strands, utilizing each method's strengths to balance their weaknesses, and implementing a pragmatic worldview that included the different epistemological and ontological assumptions of each method.

In conclusion, my role as a researcher in the convergent mixed methods research design has been defined with precision and care. By following ethical guidelines, maintaining neutrality, and transparently outlining the procedures and analysis strategies, I aimed to ensure the credibility, validity, and reliability of the

research findings. Integrating quantitative and qualitative data strands, the systematic employment of participants, and the rigorous analysis collectively contribute to a comprehensive exploration of the research questions and a solid understanding of the phenomenon under investigation.

Ethical Considerations

Ethics was integral and guiding in shaping every aspect of this research effort, from participant engagement to data handling. The following sections elaborate on the clear ethical considerations conducted to ensure the integrity of the study, respect for participants' rights, and the responsible handling of data.

Informed Consent and Participant Respect. Central to ethical practice is an inflexible commitment to informed consent. Participants were provided with comprehensive information about the research's purpose, objectives, and methodologies. This ensured that they were well aware of their roles, minimizing potential ambiguity (Hennink, 2007). Moreover, respectful engagement was maintained across cultural and gender differences, developing an inclusive and supportive environment for participants to share their insights and experiences freely.

Privacy and Confidentiality. A foundation of ethical practice, privacy was carefully protected throughout the research. Special attention was given to protecting participants' identities and sensitive information. Difficult measures were in place to ensure that data shared during interviews and observations remained confidential and that participant identities were protected with pseudo-names.

Secondary Data Usage and Proper Citation. Ethical responsibility extended to the usage of secondary data, where careful citation practices were observed to recognize and respect the intellectual property of others. Proper citation ensured the

study's scholarly honesty and recognized previous researchers' contributions (APA, 2020).

Balancing Objectives and Participant Rights. A harmonious ethical balance was achieved between the research objectives and the rights of participants. The study was required to explore valuable insights while prioritizing participants' well-being and autonomy. This balance was maintained by consistent commitment to ethical principles, and ensuring that participants' perspectives were accurately represented.

Research Methodology and Ethical Compliance. Ethical considerations carefully guided the development of the research methodology and design. The choice of research tools, data collection methods, and analytical approaches took into account participants' comfort, privacy, and safety. The methodology aligned with ethical norms to support a favorable environment facilitating participants' open sharing.

Guiding Principles and Ethical Truthfulness. The ethical standard of the study remained a guiding principle throughout the research journey. This ethical stance was obvious in interactions with participants, data handling, and findings dissemination. Every decision was shaped by a commitment to transparency, respect, and truthfulness.

In summary, the research design was changed with ethical considerations to ensure that the research process and findings followed the highest ethical values. The participants' rights, privacy, and well-being were paramount, and the ethical honesty of the study was non-negotiable. By observing the ethical principles, the study established its commitment to responsible research behavior and maintenance of the dignity and rights of all involved parties.

Chapter Summary

This chapter presents the comprehensive research methodology and outlines the procedural framework employed in this study. It begins with an explanation of the research philosophy that underpins the investigation, followed by an in-depth exploration of the research design. The chapter details the selection of the research site and the data sources used for both quantitative and qualitative research designs. It also describes the population and sample, providing a clear understanding of the study's scope and the participants involved. The sampling strategy and procedure are elaborated upon, ensuring transparency and rigor in how participants were chosen.

Furthermore, the chapter explains the research tools and instruments used to collect data, detailing the processes of data collection and analysis. It emphasizes the steps taken to establish the reliability and validity of the study, ensuring the findings are trustworthy and credible. Ethical considerations are also meticulously integrated, highlighting the measures taken to protect participants' rights and maintain the integrity of the research. This methodological framework sets a solid foundation for the study, ensuring that the research is conducted systematically and ethically, and providing a clear guide for replicating the study in future research.

Chapter Four

Level of Knowledge of Teachers on ICT

To address the purposes and research questions as mentioned in Chapter One, I presented the analysis and interpretation in the three chapters as the level of knowledge of teachers on ICT in English language classes (Chapter Four), perceptions of ICT by the English language teachers (Chapter five) and practices of ICT in English language teaching (Chapter six). He utilized the five-Likert scale model to present the participant's knowledge of ICT, perceptions of its role, and application of ICT in language instruction. Furthermore, He analyzed and interpreted the quantitative and qualitative data simultaneously.

In this chapter, he attempted to address the first objective or research question, which is the level of knowledge of ICT by secondary-level English language teachers based on their self-assessment/self-reported. For this, secondary-level English language teachers' knowledge of ICT was observed in terms of their familiarizing with hardware usage, fundamental concepts on digital devices, knowledge of educational apps and software for language teaching, the ability to surf the internet waves, and the knowledge regarding the use of ICT in pedagogical practices. These areas could be separately studied in quantitative and qualitative research design in the following paragraphs.

Results of Quantitative Data

In this section, secondary-level English language teachers' knowledge of ICT was quantitatively observed and analyzed in terms of their familiarizing with hardware usage, fundamental concepts of digital devices, knowledge of educational apps and software for language teaching, the ability to surf the internet waves, and the knowledge regarding the use of ICT in pedagogical practices.

Familiarizing With Hardware Usage

The ability to familiarize with hardware usage includes knowledge of using /operating Tablet/Mobile devices, operating and using multimedia in the classroom, using a digital camera to prepare digital materials, using an interactive whiteboard, and using storage devices (Hard disk, pen drive, etc.). The results of this section can be presented in Table 7.

Table 7

Familiarizing With Hardware Usage (n=222)

Statements	Percentage					Mean	S.D.	Level
	SD	D	N	A	SA			
I know how to operate a computer, Tablet/Mobile Device.	4.1	9.5	11.7	43.7	31.1	3.88	1.08	High
I know how to operate and use multimedia in the classroom.	3.2	24.3	11.3	45.9	15.3	3.46	1.11	Medium
I can use a digital camera.	1.4	17.6	9.9	56.8	14.4	3.65	0.98	Medium
I can prepare digital materials to use with an interactive whiteboard.	10.8	27.9	17.6	29.3	14.4	3.09	1.26	Medium
I can use storage devices (Hard disk, pen drive, etc.).	5.9	36.9	7.7	36.0	13.5	3.14	1.22	Medium
Total						3.45	0.89	Medium

The overall results of Table 7 show that the level of knowledge in ICT usage in hardware usage is medium (Mean=3.45, SD=1.08) and medium in operating and using multimedia in the classroom (Mean=3.46, SD=1.11), using a digital camera (Mean=3.65, SD=0.98), preparing digital materials to use with an interactive whiteboard (Mean=3.09, SD=1.26), and use of storage devices (Mean=3.14, SD=1.22). However, the status was found to be comparatively low in preparing digital materials using an interactive whiteboard (Mean=3.09, SD=1.26) and storage devices compared to the remaining items.

Familiarizing Hardware Usage From Demographic Perspective. Teachers'

knowledge about familiarizing hardware usage was analyzed from different demographic perspectives such as districts, qualifications, experiences, employment status, having digital devices, availability of digital resources in the schools, and training status. The results of this section can be presented in Table 8.

Table 8

Familiarizing Hardware Usage from a Demographic Perspective (n=222)

Variables	Frequency	Mean	SD	P-value
Districts				
Achham	71	3.08	0.96	0.00*
Bajhang	67	3.27	0.85	
Kailali	84	3.89	0.65	
Qualification				
Bachelor	47	3.39	0.93	0.62
Master/MPhil	175	3.46	0.88	
Experience				
Less than 5 years	34	3.23	0.79	0.42
5 - 10 years	97	3.45	0.85	
11 - 15 years	44	3.48	1.06	
More than 15 years	47	3.56	0.87	
Employment Status				
Permanent	73	3.62	0.67	0.04*
Temporary	149	3.36	0.97	
Having digital devices				
No	82	3.37	0.84	0.31
Yes	140	3.49	0.91	
Availability of digital resources in school				
Poor	40	3.31	0.76	0.25
Moderate	81	3.35	0.91	
Good	93	3.57	0.94	
Very good	8	3.65	0.54	
Training status				
No	129	3.21	0.86	0.00*
Yes	93	3.77	0.82	

**p-value* ≤ 0.05 (i.e. Significant)

In Table 8, the familiarizing with hardware usage of teachers of Kailali district (Mean= 3.89, SD= 0.65) was found to be higher than the teachers of Bajhang (Mean= 3.27, SD= 0.85) and Achham district (Mean= 3.08, SD= 0.96). However, the p-value was less than 0.05 ($p=0.00$). Hence, the result is significant, i.e., there is a significant difference among districts in the Familiarizing Hardware Usage.

Qualification-wise knowledge of familiarizing hardware usage by teachers with qualification master/MPhil (Mean= 3.46, SD= 0.88) was higher than those with bachelor level (Mean= 3.39, SD= 0.93) qualification. However, the p-value was to be more than 0.05 ($p=0.62$). Hence, the mean difference is insignificant i.e., there is an insignificant difference between the teachers having bachelor and master/MPhil level qualifications teachers.

Based on the experience of the teachers, the knowledge of familiarizing hardware usage having experience of more than 15 years (Mean= 3.56, SD= 0.87) was found to be higher than experience with 11-15 years (Mean= 3.48, SD= 1.06), 5 - 10 years (Mean= 3.45, SD= 0.85), and less than 5 years (Mean= 3.23, SD= 0.79). However, the p-value was found more than 0.05($p= 0.42$). Thus, the result is insignificant i.e., there is no significant difference in the knowledge of familiarizing hardware usage based on experience.

Based on employment status, the knowledge of familiarizing hardware usage of permanent teachers (Mean= 3.62, SD= 0.67) was found to be significantly higher than that of temporary teachers (Mean= 3.36, SD= 0.97), indicating that the role of employment status is significant in the knowledge of using Hardware Usage.

Similarly, the knowledge of familiarizing hardware usage of the teachers having digital devices (Mean=3.49, SD=0.91) was found to be higher than those not having digital devices (Mean= 3.37, SD= 0.84). However, the p-value was more than

0.05 ($p=0.31$). Therefore, the result is insignificant, i.e., there is an insignificant difference in the knowledge of using hardware usage-based availability for digital devices.

The knowledge of familiarizing hardware usage by those teachers having digital resources in school in very good condition (Mean= 3.65, SD= 0.54) was found to be higher than digital resources good (Mean= 3.57, SD= 0.94), moderate (Mean= 3.35, SD= 0.91) and poor (Mean= 3.31, SD= 0.76) condition. However, the p-value was more than 0.05 ($p=0.25$). Hence, the result is insignificant i.e., there are no significant differences in the knowledge of familiarizing hardware usage based on the availability of digital resources at school.

The respondents with ICT-related training have higher knowledge of familiarizing hardware usage (Mean= 3.77, SD= 0.82) as compared to those not having ICT-related training (Mean= 3.21, SD= 0.86), and the difference is significant because of having a p-value less than 0.05 ($p=0.00$). Hence, the training status in ICT has a significant role in determining the knowledge of familiarizing hardware usage.

Fundamental Concept of Digital Devices

The fundamental concept of digital devices refers to the teacher's knowledge of the operating system of ICT, such as on/off of the devices, the basic operating system of ICT, managing and organizing files and folders, searching and surfing the files, and using the printers and scanners. In contrast, percentage, mean, and standard deviation were used to show the status of teachers in the fundamental concept of digital devices. The results of this section are detailed and presented in Table 9.

Table 9*Fundamental Concept of Digital Devices (n=222)*

Statement	Percentage					Mean	S.D.	Level
	SD	D	N	A	SA			
I can turn on and shut down the computer /Laptop.	2.7	15.3	16.2	48.2	17.6	3.63	1.03	Medium
I know the basics of operating a computer (using a keyboard, mouse ... etc.).	3.2	7.2	6.8	55.9	27.0	3.96	0.96	High
I can organize files and folders on the computer.	6.3	13.1	8.1	41.0	31.5	3.78	1.20	High
I can manage the files (save, delete, move create, etc.).	9.9	32.0	18.0	28.8	11.3	3.00	1.21	Medium
I can search for the saved data on the hard disk or compact disk.	32.0	9.9	19.4	26.1	12.6	2.77	1.45	Medium
I can print/photocopy documents.	3.6	9.0	11.7	47.7	27.9	3.87	1.03	High
Total						3.50	0.67	Medium

The overall results of Table 9 show that the level of knowledge in ICT usage in ELTL of English teachers was medium (Mean=3.5, SD=0.67). Based on the item-wise results, the level of knowledge was found to be comparatively high in the use of basic operating computers, such as the use of a keyboard or mouse (Mean=3.96, SD=0.96) and low in searching for the saved data on the hard disk or compact disk (Mean=2.77, SD=1.45). The table further shows that the level of knowledge in basics of operating a computer (Mean=3.96, SD=0.96), organizing files and folders in the computer (Mean=3.78, SD=1.20), and printing/photocopying documents (Mean=3.87, SD=1.03) was found to be high whereas the medium in turn on and shut down the computer/laptop (Mean=3.63, SD=1.03), managing the files (Mean=3.00 SD=1.21), and searching for the saved data on the hard disk or compact disk (Mean=2.77, SD=1.45). This result shows that the teachers' level of knowledge on the fundamental concept of ICT tools is medium in most items.

Fundamental Concept of ICT Devices from Demographic Perspective.

Teachers' knowledge about familiarizing hardware usage was analyzed from different demographic perspectives such as districts, qualifications, experiences, employment status, having digital devices, availability of digital resources in the schools, and training status. The results of this section are detailed and presented in Table 10.

Table 10

Fundamental Concept of ICT Devices from a Demographic Perspective(n=222)

Variables	Frequency	Mean	S.D.	p-value
Districts				
Achham	71	3.27	0.76	0.00*
Bajhang	67	3.46	0.65	
Kailali	84	3.73	0.54	
Qualification				
Bachelor	47	3.38	0.67	0.17
Master/MPhil	175	3.54	0.67	
Experience				
Less than 5 years	34	3.42	0.60	0.76
5 - 10 years	97	3.48	0.69	
11 - 15 years	44	3.55	0.78	
More than 15 years	47	3.56	0.60	
Employment Status				
Permanent	73	3.61	0.54	0.09
Temporary	149	3.45	0.73	
Having digital devices				
No	82	3.44	0.64	0.30
Yes	140	3.54	0.69	
Availability of digital resources in school				
Poor	40	3.39	0.68	0.25
Moderate	81	3.48	0.72	
Good	93	3.59	0.65	
Very good	8	3.33	0.13	
Training status				
No	129	3.40	0.66	0.01*
Yes	93	3.65	0.67	

* $p\text{-value} \leq 0.05$ (i.e. Significant)

In Table 10, the fundamental concept of using ICT tools in Kailali district (Mean= 3.73, SD= 0. 0.54) was found to be higher than Achham (Mean= 3.27, SD= 0.76) and Bajhang (Mean= 3.27, SD= 0.48) district. However, the p-value was less than 0.05 ($p=0.00$). Hence, the result is significant, indicating that the district has a significant role in determining the fundamental concept of using ICT tools. Based on qualification, the knowledge of the fundamental concept of using ICT tools of teachers having master/MPhil (Mean= 3.54, SD= 0.67) qualification was found to be higher than those having bachelor level (Mean= 3.38, SD= 0.67) qualification teachers. Yet, the p-value was found to be more than 0.05 ($p=0.17$). Thus, qualification has no role in determining the knowledge of teachers in using fundamental ICT tools.

Based on experience, the concept of ICT tools having experience of more than 15 years (Mean= 3.56, SD= 0.60) was found to be higher than experience with 11-15 years (Mean= 3.55, SD= 0.78), 5-10 years (Mean= 3.48, SD= 0.69), and less than 5 years (Mean= 3.42, SD= 0.60). However, the p-value was more than 0.05($p= 0.76$). Therefore, the experience has no role in determining the knowledge of teachers in using fundamental ICT tools.

Based on employment status, the concept of ICT tools of permanent teachers (Mean= 3.61, SD= 0.54) was found to be higher than temporary teachers (Mean= 3.45, SD= 0.73). Yet, the p-value was more than 0.05 ($p= 0.09$). Hence, employment status has no role in determining teachers' knowledge of using fundamental ICT tools.

The concept of ICT tools of respondents having digital devices (Mean=3.54, SD=0.69) was higher than respondents having no digital devices (Mean= 3.44, SD= 0.64). However, the p-value was more than 0.05 ($p=0.30$). Therefore, having digital

devices with the teachers has no role in determining the knowledge of teachers in using fundamental ICT tools.

Availability of digital resources in good condition at school (Mean= 3.59, SD= 0.65) was found to be more than moderate (Mean= 3.48, SD= 0.72), poor (Mean= 3.39, SD= 0.68) and very good (Mean= 3.33, SD= 0.13). Yet, the p-value was more than 0.05 ($p=0.25$). Hence the conditions of digital resources at school have no role in determining the knowledge of teachers in using fundamental ICT tools.

The respondents with ICT-related training (Mean= 3.65, SD= 0.67) were found to be higher than the respondents who have no training (Mean= 3.40, SD= 0.66). However, the p-value was less than 0.05 ($p=0.01$). Thus, ICT-related training has no role in determining the knowledge of teachers in using fundamental ICT devices.

Educational Apps and Software

The teachers' knowledge of educational apps and software for teaching includes using the software for word processing software such as Microsoft Word (creating files and folders, typing, editing, saving, etc.), presentation software, i.e., Microsoft PowerPoint (PowerPoint presentation), Spelling checker software, e-dictionary, paraphrasing software plagiarism software, educational apps such as Google Scholar, Mendeley, Zotero, Endnote, Sci-Hub, etc., grammar checker, pronunciation, designing programmes (i.e., photoshop, flash, paint, digital photos, etc.), spreadsheet, downloading /uploading software, and using virtual classes such as Zoom, Teams, etc. The results of this section are detailed and presented in Table 11.

Table 11*Educational Apps and Software(n=222)*

Statements	Percentage					Mean	S.D.	Level
	SD	D	N	A	SA			
I know how to use word processing software (e.g. MS Word)	3.6	11.7	7.1	42.3	25.2	3.74	1.07	High
I know how to use presentation software (e.g. MS PowerPoint)	8.1	19.8	15.8	37.8	18.5	3.39	1.22	Medium
I know how to use the spelling checker software e.g. Grammarly	4.5	18.5	13.1	43.7	20.3	3.57	1.14	Medium
I know how to use the e-dictionary	10.8	13.1	9.9	44.1	22.1	3.54	1.27	Medium
I know how to use the paraphrasing software	7.2	25.2	16.2	32.0	19.4	3.31	1.24	Medium
I know how to use plagiarism software	13.1	40.1	17.6	16.7	12.6	2.76	1.24	Medium
I know how to use the English grammar checker software	14.0	21.2	17.6	29.7	17.6	3.16	1.32	Medium
I know how to use the pronunciation software	2.7	18.0	11.3	49.5	18.5	3.63	1.06	Medium
I can design programmes	10.8	26.6	11.7	29.3	21.6	3.24	1.34	Medium

(Adobe Photoshop, Flash, Paint, digital photos movies, or other graphics)									
I can use a spreadsheet to plot a graph (MS –Excel)	10.8	22.5	9.9	33.8	23.0	3.36	1.34	Medium	
I can download and install software and mobile Apps	11.7	14.4	17.6	37.4	18.9	3.37	1.27	Medium	
I can use virtual classrooms with Zoom, Teams, Google Meet Google Hangout, etc.	8.6	33.8	16.7	24.8	16.2	3.06	1.26	Medium	
Total						334	0.80	Medium	

The overall results of Table 11 show that the level of knowledge in ICT usage in educational apps and software is medium (Mean=3.34, SD=0.80). Based on the item-wise result, the level of knowledge was found to be comparatively higher in using the word processing software (Mean=3.74, SD=0.1.07) and low in using virtual classrooms with Zoom, Teams, Google Meet Google, Hangout, etc. (Mean=3.06, SD=1.26). The table further shows that the level of knowledge in using presentation software (Mean= 3.39, SD=1.22), using the spelling checker software e.g. Grammarly (Mean=3.57, SD=1.14), using e-dictionary (Mean=3.54, SD=1.27), using paraphrasing software (Mean= 3.31, SD=1.24), using plagiarism software(mean=2.76, SD=1.24), using the English grammar checker software (mean=3.16, SD=1.32), using pronunciation software (Mean=3.63, SD=1.06), design program (Adobe Photoshop, Flash, Paint, digital photos movies or other graphics) (Mean=3.24, SD=1.34), using a

spreadsheet to plot a graph (Mean=3.36, SD=1.34), and download and install software and mobile Apps (Mean=3.37, SD=1.27) was found to be medium. The result shows that ICT knowledge was found to be medium in almost all items related to educational apps and software.

Educational Apps and Software from a Demographic Perspective.

Teachers' knowledge about educational apps and software was analyzed from different demographic perspectives such as districts, qualifications, experiences, employment status, having digital devices, availability of digital resources in the schools, and training status. The results of this section are detailed and presented in Table 12.

Table 12

Educational Apps and Software from a Demographic Perspective(n=222)

Variables	Frequency	Mean	SD	P-value
Districts				
Achham	71	3.08	0.81	0.00*
Bajhang	67	3.22	0.67	
Kailali	84	3.67	0.78	
Qualification				
Bachelor	47	3.14	0.68	0.05*
Master/MPhil	175	3.40	0.82	
Experience				
Less than 5 years	34	3.24	0.63	0.79
5 - 10 years	97	3.39	0.80	
11 - 15 years	44	3.30	0.93	
More than 15 years	47	3.37	0.78	

Employment Status				
Permanent	73	3.44	0.73	0.20
Temporary	149	3.29	0.83	
Having digital devices				
No	82	3.18	0.75	0.02*
Yes	140	3.44	0.81	
Availability of digital resources in school				
Poor	40	3.30	0.59	0.05*
Moderate	81	3.18	0.83	
Good	93	3.49	0.84	
Very good	8	3.48	0.63	
Training status				
No	129	3.14	0.70	0.00*
Yes	93	3.62	0.85	

**p-value* ≤ 0.05 (i.e. Significant)

In Table 12, the knowledge of teachers in using educational apps and software from Kailali district (Mean= 3.67, SD= 0. 0.78) was found to be higher than in the teachers of Achham (Mean= 3.08, SD= 0.81) and Bajhang (Mean= 3.22, SD= 0.67). However, the p-value was less than 0.05 (p=0.00). Thus, the result is significant, i.e., there is a significant difference in the knowledge of teachers about using educational apps and software among districts.

Based on qualification, the knowledge of teachers having master/MPhil (Mean= 3.40, SD= 0.82) qualification in using educational apps and software was found to be higher than those having bachelor qualification (Mean= 3.14, SD= 0.68).

However, the p-value was equal to 0.05 ($p=0.05$) indicating that the qualification has a significant role in determining the knowledge of using Educational Apps and Software.

Based on the experience of respondents, the knowledge of teachers in using Educational Apps and Software having experience 5-10 years (Mean= 3.39, SD= 0.80) was found to be higher than experience with more than 15 years (Mean= 3.37, SD= 0.78), 11-15 years (Mean= 3.30, SD= 0.93), and less than 5 years (Mean= 3.24, SD= 0.63). However, the p-value was more than 0.05 ($p= 0.79$). Hence the result is insignificant and shows that the experience has no significant role in determining the knowledge of using Educational Apps and Software

Based on employment status, the knowledge of teachers in using educational apps and software, permanent teachers (Mean= 3.44, SD= 0.73) was found to be higher than that of temporary teachers (Mean= 3.29, SD= 0.83). Yet, the p-value was more than 0.05 ($p= 0.20$). Thus, the result is insignificant indicating that employment status has no significant role in determining the knowledge of using educational apps and software.

Knowledge of teachers in using educational apps and software having digital devices (Mean=3.44, SD=0.81) was found to be higher than those not having digital devices (Mean= 3.18, SD= 0.75). However, the p-value was less than 0.05 ($p=0.02$). Hence the availability of digital devices with the teachers has a significant role in determining the knowledge of using educational apps and software.

The knowledge of teachers in using educational apps and software based on the availability of digital resources good condition at school (Mean= 3.49, SD= 0.84) was found to be more than digital resources very good (Mean= 3.48, SD= 0.63), poor (Mean= 3.30, SD= 0.59) and moderate (Mean= 3.18, SD= 0.83). However, the p-

value was equal to 0.05 ($p=0.05$), indicating that the condition of digital resources at school has a significant role in determining the knowledge of using educational apps and software.

Knowledge of teachers in using educational apps and software concerning trained ICT teachers (Mean= 3.62, SD= 0.85) was found to be higher than the respondents who have no training (Mean= 3.14, SD= 0.70). However, the p-value was less than 0.05 ($p=0.00$). Hence, ICT-related training has a significant role in determining the knowledge of using educational apps and software.

Internet Surfing

The ability to Internet surfing includes knowledge of using Google Sites, sending/receiving mail/SMS, using web-based applications (i.e., YouTube), editing texts, developing online questionnaires, searching information on the Internet, participating in social media and learning platforms for the resources/materials. The results of this section can be presented in Table 13.

Table 13

Internet Surfing (n=222)

Statements	Percentage					Mean	S.D.	Level
	SD	D	A	SA				
I know how to use the Google site for authentic ELT materials	6.8	29.3	4.5	1.4	18.0	3.35	1.26	Medium
I know how to use sending and receiving SMS, email, etc.	3.6	14.0	10.8	49.1	22.5	3.73	1.07	High

I know how to use Web-Based Applications (e.g. <i>YouTube</i> .) in teaching and learning	4.5	20.7	17.1	35.6	22.1	3.50	1.18	Medium
I can edit text online	5.9	36.9	18.0	27.0	12.2	3.03	1.17	Medium
I can develop a questionnaire online	9.0	33.3	5.4	37.4	14.9	3.16	1.28	Medium
I can search the information on the Internet	5.4	24.8	16.2	36.9	16.7	3.35	1.18	Medium
I can participate in social networks (e.g., Facebook, YouTube, Viber, Skype, WhatsApp)	3.2	16.2	10.4	48.6	21.6	3.69	1.08	High
I can download or upload curriculum resources from/to the website or learning platforms for students to use	3.2	26.1	15.8	35.1	19.8	3.42	1.17	Medium
Total						3.40	0.97	Medium

The overall results of Table 13 show that the level of knowledge of teachers in Internet surfing was medium (Mean=3.4, SD=0.97). Based on the item-wise result,

the level of knowledge was found to be comparatively high in sending and receiving an SMS or email, (Mean=3.73, SD=1.07) and low in editing text online (Mean=3.03, SD=1.17). Furthermore, item-wise results show that the level of participation in social networks (Mean=3.69, SD=1.08), using the Google site for authentic ELTL materials (Mean=3.35, SD=1.26), using web-based applications in teaching and learning (Mean=3.50, SD=1.18), developing questionnaire in online (Mean=3.16, SD=1.28), searching the information on the internet (Mean=3.35, SD=1.18), and downloading or uploading curriculum resources from/to website or learning platforms for students to use (Mean=3.42, SD=1.17) was found to be medium.

Internet Surfing from a Demographic Perspective. Teachers' knowledge of internet surfing was analyzed from different demographic perspectives such as districts, qualifications, experiences, employment status, having digital devices, availability of digital resources in the schools, and training status. The results of this section are detailed and presented in Table 14.

Table 14

Internet Surfing from a Demographic Perspective (n=222)

Variables	Frequency	Mean	SD	P-value
Districts				
Achham	71	3.05	1.04	0.00*
Bajhang	67	3.28	0.87	
Kailali	84	3.80	0.85	
Qualification				
Bachelor	47	3.17	0.93	0.05*
Master/MPhil	175	3.47	0.97	
Experience				
Less than 5 years	34	3.19	0.95	0.30
5 - 10 years	97	3.38	0.94	
11 - 15 years	44	3.41	1.08	

More than 15 years	47	3.60	0.93	
Employment Status				
Permanent	73	3.55	0.87	0.12
Temporary	149	3.33	1.01	
Having digital devices				
No	82	3.24	0.91	0.05*
Yes	140	3.50	0.99	
Availability of digital resources in school				
Poor	40	3.26	0.97	0.02*
Moderate	81	3.22	0.91	
Good	93	3.64	1.01	
Very good	8	3.19	0.61	
Training status				
No	129	3.15	0.93	0.00*
Yes	93	3.75	0.92	

* p -value \leq 0.05 (i.e. Significant)

In Table 14, the knowledge of teachers in internet surfing Kailali district (Mean= 3.80, SD= 0.85) was found to be higher than Bajhang (Mean= 3.28, SD= 0.87) and Achham (Mean= 3.05, SD= 1.04) district. However, the p -value was found to be less than 0.05 ($p=0.00$), indicating that the district has a significant role in determining the knowledge of teachers in internet surfing.

Concerning qualification, the knowledge of teachers in internet surfing with master/MPhil qualification (Mean= 3.47, SD= 0.97) was found to be higher than those having bachelor level qualification (Mean= 3.17, SD= 0.93). However, the p -value was found to be equal to 0.05 ($p=0.05$), indicating that the qualification has a significant role in determining the knowledge of teachers in internet surfing.

Based on the experience of respondents, the knowledge of teachers in internet surfing having experience of more than 15 years (Mean= 3.60, SD= 0.93) was found to be higher than experience with 11-15 years (Mean= 3.41, SD= 1.08), 5-10 years

(Mean= 3.38, SD= 0.94) and less than 5 years (Mean= 3.19, SD= 0.95). Yet, the p-value was more than 0.05 ($p= 0.12$). Hence experience has no significant role in determining the knowledge of teachers in internet surfing.

Based on employment status, the knowledge of teachers in internet surfing of permanent teachers (Mean= 3.55, SD= 0.87) was found to be higher than temporary teachers (Mean= 3.33, SD= 1.01). However, the p-value was more than 0.05 ($p= 0.12$). Thus, the result is insignificant indicating that employment status has no significant role in determining the knowledge of teachers in internet surfing.

The knowledge of teachers in internet surfing of respondents having digital devices (Mean=3.50, SD=0.99) was higher than respondents having no digital devices (Mean= 3.24, SD= 0.91). However, the p-value was equal to 0.05 ($p=0.05$). Hence the availability of digital devices to teachers has a significant role in determining the knowledge of teachers in internet surfing.

Condition of digital resources with good condition at school (Mean= 3.64, SD= 1.01) was found to be higher than digital resources poor (Mean= 3.26, SD= 0.97), moderate (Mean= 3.22, SD= 0.91) and very good (Mean= 3.19, SD= 0.61) in the knowledge of internet surfing. However, the p-value was found to be less than 0.05 ($p=0.02$). Hence the condition of digital resources at school has a significant role in determining the knowledge of teachers in internet surfing. Based on the mean score, the result was found to favor having digital resources at school in good condition.

The knowledge of internet surfing was found to be high with the teachers having ICT-related training (Mean= 3.75, SD= 0.92) as compared to the teachers not having training (Mean= 3.15, SD= 0.93). The p-value was found to be less than 0.05 ($p=0.00$). Hence, the result is significant, indicating that the training status has a

significant role in determining the knowledge of teachers in internet surfing, and the result is in favor of trained teachers.

ICT in the Pedagogical Practices

Along the same line, the knowledge regarding the use of ICT in pedagogical practices refers to using ICT in making subjective notes, developing lesson/unit plans, developing the questions and test items, solving spelling/grammar problems, updating my subject knowledge and enhancing teaching skill, developing several projects for English language teaching, generating instrumental material, sharing videos related English language learning, incorporating authentic tasks in the teaching of English language through project-based learning, developing students' English language problem solving through inquiry-based learning, suggesting students about ethical issues in using digital resource, learning the student internet surfing for English Language learning, learning different programmes in ICT devices and assessing and giving Feedback in online. The results of this section are detailed and presented in Table 15.

Table 15

ICT in the Pedagogical Practices (n=222)

Statements	Percentage					Mean	S.D.	Level
	SD	D	N	SA				
I can use ICT in teaching by employing collaborative learning	5.0	28.8	18.0	34.7	13.5	3.23	1.15	Medium
I can use ICT to represent the English	2.7	28.8	16.2	42.8	9.5	3.27	1.06	Medium

language communicating ideas.									
I can use ICT to communicate English processes.	3.6	21.6	18.0	41.9	14.9	3.43	1.09	Medium	
I can use ICT to solve English language problems e.g. spelling, meaning.	3.2	24.3	11.3	50.5	10.8	3.41	1.07	Medium	
I can use ICT in teaching by employing direct instruction	3.6	29.7	22.5	34.2	9.9	3.17	1.08	Medium	
I can use ICT in teaching by employing discovery learning	5.4	27.9	17.6	35.1	14.0	3.24	1.16	Medium	
I can use ICT in teaching that enhances English language content and how it is taught	3.6	23.0	15.3	39.6	18.5	3.46	1.14	Medium	
I can use ICT to teach topics of	5.4	28.8	11.3	42.8	11.7	3.27	1.16	Medium	

English that are better learned when employing specific teaching approaches									
I can use ICT to incorporate authentic tasks in the teaching of the English language through project-based learning	5.9	29.3	10.8	43.2	10.8	3.24	1.16	Medium	
I can use ICT to teach students to develop their English language problem-solving through inquiry-based learning	5.0	25.7	8.6	49.1	11.7	3.37	1.13	Medium	
I can produce a text using a word processing program	7.7	26.1	10.8	43.7	11.7	3.26	1.19	Medium	
I can suggest to students about internet surfing for English Language	3.2	19.4	14.9	49.1	13.5	3.50	1.05	Medium	

learning									
I can suggest to students about ethical issues in using digital resources	6.3	19.4	6.3	51.8	16.2	3.52	1.16	Medium	
I can make a good blend of ICT tools in my face-to-face teaching.	7.7	29.7	24.8	26.6	11.3	3.04	1.15	Medium	
Total						3.32	0.92	Medium	

The overall results of Table 15 show that the level of knowledge in ICT usage in pedagogical practices was medium (Mean=3.32, SD=0.92). Based on the item-wise result, the level of knowledge was found to be comparatively higher in informing students about ethical issues in using digital resources (Mean=3.52, SD=1.16) and low in making a good blend of ICT tools in face-to-face teaching (Mean=3.04, SD=1.15). Furthermore, the status of items as using ICT in teaching by employing collaborative learning (Mean=3.23,SD=1.15), using of ICT to represent English language communicating ideas (Mean=3.27,SD=1.06), using ICT to communicate English processes (Mean=3.43, SD=1.09), using ICT to solve English language problems e.g. spelling, meaning (Mean=3.41, SD=1.07), using ICT in teaching by employing direct instruction (Mean=3.17, SD=1.08), using ICT in teaching by employing discovery learning (Mean=3.24, SD=1.16), using ICT in teaching that enhances English language content and how it taught (Mean=3.46, SD=1.14), using ICT to teach topics of English that are better learned when employing specific teaching approaches (Mean=3.27, SD=1.16), using ICT to incorporate authentic tasks

in the teaching of English language through project-based learning (Mean=3.24, SD=1.16), using ICT to teach students to develop their English language problem solving through inquiry-based learning (Mean=3.37, SD=1.13), producing a text using a word processing program (Mean=3.26, SD=1.19), and suggesting students about internet surfing for English Language learning (Mean=3.50, SD=1.05) which was found to be medium.

ICT in the Pedagogical Practices from Demographic Perspective.

Teachers' knowledge of pedagogical practices was analyzed from different demographic perspectives such as districts, qualifications, experiences, employment status, having digital devices, availability of digital resources in the schools, and training status. The results of this section are detailed and presented in Table 16.

Table 16

ICT in the Pedagogical Practices from a Demographic Perspective(n=222)

Variables	Frequenc y	Mean	SD	P -value
Districts				
Achham	71	3.01	0.94	0.00*
Bajhang	67	3.14	0.88	
Kailali	84	3.71	0.78	
Qualification				
Bachelor	47	3.12	0.91	0.09
Master/MPhil	175	3.37	0.91	
Experience				
Less than 5 years	34	3.08	0.79	0.05*
5 - 10 years	97	3.28	0.90	
11 - 15 years	44	3.27	1.01	
More than 15 years	47	3.60	0.89	
Employment Status				

Permanent	73	3.62	0.68	0.00*
Temporary	149	3.16	0.98	
Having digital devices				
No	82	3.14	0.92	0.03*
Yes	140	3.42	0.90	
Availability of digital resources in school				
Poor	40	3.19	0.85	0.01*
Moderate	81	3.12	0.95	
Good	93	3.50	0.88	
Very good	8	3.82	0.81	
Training status				
No	129	3.09	0.87	0.00*
Yes	93	3.63	0.89	

* p -value \leq 0.05 (i.e. Significant)

In Table 16, the knowledge of teachers in pedagogical practices in Kailali district (Mean= 3.71, SD= 0.78) was found to be higher than pedagogical practices (Mean= 3.14, SD= 0.88) and Achham (Mean= 3.01, SD= 0.94) districts. However, the p -value was less than 0.05 ($p=0.00$). Thus, the result is significant i.e., there is a significant difference in the knowledge of teachers in pedagogical practices among districts. Since the mean value of knowledge concerning the Kailali district was found to be higher than the remaining district, the result is in favor of the Kailali district.

Based on qualification, the knowledge of teachers in using ICT for pedagogical practices was found to be higher among teachers having master/MPhil (Mean= 3.37, SD= 0.91) qualification than the teachers with bachelor level qualification (Mean= 3.12, SD= 0.91). However, the p -value was more than 0.05 ($p=0.09$). Hence the qualification has no role in determining the knowledge of teachers in using ICT for pedagogical practices.

Based on the experience of respondents, the knowledge of teachers in using ICT for pedagogical practice experience of more than 15 years (Mean= 3.60, SD= 0.89) was found to be higher than experience with 5- 10 years (Mean= 3.28, SD= 0.90), 11-15 years (Mean= 3.27, SD= 1.01), and less than 5 years (Mean= 3.08, SD= 0.79). However, the p-value was less than 0.05 ($p= 0.05$). Hence, experience is a significant factor in determining the knowledge of teachers in using ICT for pedagogical practice in favor of the teachers with high experience.

Based on employment status, the knowledge of teachers in the pedagogical practice of permanent teachers (Mean= 3.62, SD= 0.68) was found to be higher than temporary teachers (Mean= 3.16, SD= 0.98) with a significant p-value ($p=0.00<0.05$). The result shows that the employment status of the teachers has a significant role in determining the knowledge of teachers in pedagogical practice in favor of permanent teachers because of having a higher mean value.

Knowledge of teachers in using ICT for the pedagogical practice of respondents having digital devices (Mean=3.42, SD=0.90) was found to be higher than respondents having no digital devices (Mean= 3.14, SD= 0.92). The p-value was found to be less than 0.05 ($p=0.03$). The availability of digital devices to teachers has a significant role in determining the knowledge of teachers in using ICT for pedagogical practice. Furthermore, the mean score of teachers having digital devices is higher than those not having such resources.

This section also measured the knowledge of teachers in using ICT for pedagogical practice concerning the condition of digital resources. Availability of digital resources in very good condition at school (Mean= 3.82, SD= 0.81) was found to be higher than digital resources good (Mean= 3.50, SD= 0.88), poor (Mean= 3.19, SD= 0.85) and moderate (Mean= 3.12, SD= 0.95). However, the p-value was less than

0.05 ($p=0.01$). Hence, the result is significant. The result indicates that the knowledge of teachers in using ICT for pedagogical practice was found to be significantly high among those teachers having good conditions of digital resources at school.

The teachers having ICT-related training have higher knowledge of using ICT for pedagogical practice (Mean= 3.63, SD= 0.89) than those not having ICT-related training (Mean= 3.09, SD= 0.87). Moreover, the value was found to be less than 0.05 ($p=0.00$), and the mean value was found to be high among trained teachers; hence, the training status is a significant factor in determining the knowledge of teachers in using ICT for pedagogical practice in favor of trained teachers.

Summary of the Quantitative Results on the Knowledge of Using ICT

In this quantitative results, secondary-level English language teachers' knowledge of ICT was assessed their familiarity with hardware usage, fundamental concepts of digital devices, knowledge of educational apps and software, internet surfing ability, and ICT integration in pedagogical practices. The results indicate that teachers' familiarity with hardware and fundamental digital concepts was moderate, with variations observed based on demographic factors such as district, qualification, experience, employment status, availability of digital resources, and ICT training. Teachers demonstrated medium-level knowledge of educational apps and software usage, with significant influences from qualification, availability of digital devices, condition of digital resources, and ICT training. Similarly, their ability to search the internet and integrate ICT in teaching showed a medium-level understanding, with significant impacts from the district, experience, employment status, availability of digital devices, condition of digital resources, and ICT training.

Results of Qualitative Data

In this section, secondary-level English language teachers' knowledge of ICT was qualitatively observed and analyzed in terms of their familiarization with hardware usage, fundamental concepts on digital devices, knowledge of educational apps and software for language teaching, the ability to surf the internet waves, and the knowledge regarding the use of ICT in pedagogical practices.

Familiarizing With Hardware Usage

This code "Familiarizing with Hardware Usage" refers to English language teachers' knowledge of hardware usage devices of ICT such as using operating Tablet/Mobile devices, operating and using multimedia in the classroom, using a digital camera, preparing digital materials, using a smart board /an interactive whiteboard and using storage devices (Hard disk, pen drive, etc. In this regard, most of the participants from the study expressed their familiarity with most of the ICT devices. Uamesh, for example, described that he was familiar with most of the ICT devices available in his schools and at home. He explained:

I know something about ICT devices such as computers, mobile, digital cameras, keyboards, etc. I have a mobile phone, pen drive, and laptop among them. I know about them but which devices I have not, I am less familiar with and less used to. I do not know about the interactive whiteboard and smartboard. I know more devices such as wireless, adapter, multimedia projectors, memory, and networking. I am sorry I do not know other devices since they are unavailable in our school or home.

In the same line, Shambhu was familiar with most ICT devices but seemed more curious about ICT. He has his laptop and Android mobile. So, he used them when he had leisure time. He shared his knowledge when needed. He expressed;

I know what you said about ICT devices, i.e., mobile, computer, laptop, digital cameras, multimedia projectors, interactive whiteboards, pen drives, CDs, etc. among them, but I don't know about interactive whiteboards. I listened and watched on YouTube about it, but I don't use it. It is not available at my school. Another CD and DVD are old, nobody uses them, I never use them. Generally, I have a laptop and an Android mobile. I use them frequently, personally or officially. I help others who want to learn. I share my knowledge without any bore. ICT is my interesting subject.

Similarly, Gita was less familiarized with ICT devices since she used only a mobile phone at home and occasionally used the school's laptop in her classroom teaching. She had limited knowledge about ICT because of insufficient ICT devices. She mentioned;

Hardware usage signifies the physical tools that drive our technological interactions. This includes devices like mobile computers, digital cameras, smart boards, interactive whiteboards, printers, scanners, projectors, etc. I only know mobile, printer, scanner projector which I use sometimes when I need. I use mobile in my daily life but sometimes I use a projector, scanner, and printer at my school. Rest of the others, I only know their names. So, I am unfamiliar. But, by displaying attractive visuals through multimedia, Hardware usage transforms my classroom into an immersive learning environment. In my point of view, hardware devices are very powerful tools in the English language classroom but there is no environment in my school.

On the same line, Ramesh expressed a similar view of Gita. He said;

Yes, there are numerous tools available in the present-day world. New devices are invented, but I know the names of some devices by hearing, some practical, some by observing, such as computers, laptops, desktops, palmtops, digital

cameras, multimedia, digital whiteboards, and mobile devices. I believe the internet is considered the primary method of utilizing any of these devices.

I asked other questions to him but he seemed not ready to respond and looked uneasy. He diverted the conversation to another subject. I requested him to share his knowledge about Hardware Usage. He realized his limited knowledge of ICT.

But Harish expressed different views than, Umesh, Gita, and Ramesh. He knew about most of the hardware devices. He also practically used it in school and out of school in his daily life. He seems his competency is higher than others. Harish expressed;

Hardware usage in ICT means the real things we use daily with technology. Like computers, laptops, tablets, phones, digital boards, interactive whiteboards, digital cameras, microphones, printers, scanners, projectors, memory, input, output, and storage devices, cables, connectors, servers, networking devices, security devices, backup, recovery devices, etc. I know most of them. In my English classes, I use my laptop, smartphone, and multimedia projector to make my lessons interesting, but they are digital material for my students. I also talk to them using my smartphone. It helps me send messages, answer questions, and even ask them quick questions to see if they understand. This hardware usage improves my teaching and helps me talk to my students easily. Not only do I use them in school, but I also use them out of school for professional activities, proposal writing, teaching in computer institutions, and so on. So, I know hardware usage for ICT devices. In my line, they are essential parts like my body organs.

Overall summary, English language teachers' knowledge of hardware usage devices related to ICT is explored, including Tablet/Mobile devices, multimedia in

the classroom, digital cameras, digital materials, smart boards, an interactive whiteboard and storage devices; Hard disk, CD-ROM, pen drive, etc. The most of participants expressed familiarity with a variety of ICT devices. Some participants, like Harish, displayed a good understanding of various devices, while others, like Gita, had limited familiarity due to their usage patterns in the classroom.

Fundamental Concept of Digital Devices

This code, "Fundamental concept of digital devices," relates to the awareness of English language teachers regarding digital tools of ICT, including tasks like starting and shutting down computers/laptops, basic computer operations (using keyboard, mouse, etc.), managing files and folders, arranging them on the computer, handling files (saving, deleting, moving, creating, etc.), searching for stored data on hard disks or compact disks, and printing/photocopying documents. Many participants in the study revealed their understanding of these essential digital device concepts. For instance, Harish conveyed his basic knowledge of most ICT digital devices. He gained significant knowledge of these devices during the COVID-19 pandemic. He elaborated,

I had limited knowledge about ICT digital devices before, but when the COVID-19 pandemic hit worldwide, I had the opportunity to learn more about them through virtual classes. During that time, I had sufficient time to improve my understanding. All teachers had to adapt and learn, and I also invested in a laptop. Through this, I gained considerable knowledge and started using digital devices at school and outside. As for the fundamental digital devices, I feel very confident about them. Starting and shutting down computers or laptops is a breeze for me. I'm adept at using the keyboard and mouse, organizing files and folders, handling tasks like saving, deleting, moving, or

searching for data, and efficiently managing printing and photocopying documents. This proficiency enables me to smoothly handle these tasks and guide my students through them without hesitation.”

In the same line, Shambhu, Umesh, and Rita expressed their level of fundamental digital devices. They knew the basic knowledge and used them in their daily life. They knew them in their practices on their devices. They had well-known knowledge for helping the students or others who wanted to learn. One of them, Rita said,

I know about the basic ideas of digital devices. Starting and stopping computers or laptops is easy for me. I'm good with using the keyboard and mouse, and can carefully put files and folders in order. I'm also good at handling information, like saving, deleting, moving, and making new things. I can quickly look through where things are stored and when I need to find material. Printing and making copies of papers are things I do without any problems.

However, Ramesh and Gita were less familiar than Harish, Shambhu, Umesh, and Rita. They lacked expertise in the fundamental concepts of digital devices. Typically, they use these devices when necessary but need to show strong learning to expand their knowledge, having only a basic understanding of them. Among them, Ramesh mentioned,

I have some experience with computers, although I have not yet explored them comprehensively. I can handle starting and shutting down computers, and I manage reasonably well with the keyboard and mouse. Folders and files are areas that I'm still getting to know, but I'm learning how to work with them. I save my work and search for things when I need them. Printing is a task I'm

working on understanding better, as I'm figuring out how to make it work effectively.

Overall, the fundamental concept of digital devices focuses on the awareness of English language teachers regarding basic digital operations and tasks associated with ICT, such as starting and shutting down computers/laptops, using keyboard and mouse, file management, searching for data, and printing/photocopying documents. Harish demonstrated high proficiency in these tasks, attributing his increased knowledge to the COVID-19 pandemic and virtual classes. Others like Umesh and Rita also had a good grasp of fundamental digital device concepts and could use them effectively in their personal and professional lives. In contrast, Ramesh and Gita had a more basic understanding and were still improving their skills in certain areas.

Educational Apps and Software

The term "Educational Apps and Software" relates to the understanding that English language teachers have regarding educational applications and software in ICT. This includes tasks like utilizing word processing software such as MS Word, presentation software like MS PowerPoint, spelling checker tools like Grammarly, e-dictionaries, paraphrasing and plagiarism software, English grammar checkers, pronunciation assistance, as well as design programmes like Adobe Photoshop, and Flash, Paint, for digital photos, movies, or graphics. It also covers using spreadsheets for creating graphs (like MS Excel), downloading and installing software and mobile apps, and engaging in virtual classrooms using Zoom, Teams, Google Meet, and Google Hangout. For instance, Umesh and Shambhu displayed their familiarity with most of these ICT tools. They gained substantial knowledge of these apps and software through practice and learning. They showed enthusiasm and confidence in

his activities during the interview. One of them Umesh, spoke openly and frequently smiled, effectively using body language to convey his points. He elaborated,

Yes, from my point of view, educational apps and software are computer programs that help us learn and teach. They do different things, like making documents with Microsoft Word, showing PowerPoint slides, and checking spelling with tools like Grammarly. E-dictionaries help to find word meanings, and design software like Adobe Photoshop creates pictures. Virtual classrooms like Zoom and Google Meet let us learn and talk online. I know some tools and how they can be useful for teaching and learning. However, I am less familiar with plagiarism software, English grammar checkers, and pronunciation assistance. However, I try to learn by looking at videos.

Along the same line, Harish had more confidence than Umesh. He explained these tools without hesitating. He also talked about their usage and functions in the classroom.

Harish explained,

Educational apps and software are digital tools that help with teaching and learning. I know how to use Microsoft Word, PowerPoint, and Excel well. I use them to make nice lessons, keep track of how students are doing, and make presentations that interestingly show data. I also use Adobe Photoshop to make cool pictures for my lessons. I use interactive apps in my classes to get students excited and help them be creative. I care about ensuring all students can learn, so I use special keyboards. I use language apps to help different types of learners do well in my class. I'm good at Microsoft Word, PowerPoint, and Excel, which help me to develop good learning material. These tools make my teaching better and help students understand more. I

also use safe online classrooms like Zoom and Google Meet to ensure students are secure while learning online.

However, Rita and Gita, in this case, are less familiar with educational apps and some of them still need to be discovered. They were never used in the class. Some are rarely used, and they need to be more familiar. One of them, Gita said,

Educational apps and software are digital tools that can help with teaching, but I have yet to use them often. I've tried basic programmes like Microsoft Word to make simple papers for my students. I know these tools can be useful, but I have yet to learn much about them. Sometimes, I use PowerPoint to make basic slides for my lessons. I know educational apps and software are supposed to be good, but I have yet to use them much. I've used Microsoft Word a few times to make simple papers for my students. I understand that these tools are modern and helpful, but I haven't had a chance to use them much. I usually stick to traditional ways of teaching, like using a chalkboard.

Overall summary, English language teachers' familiarity with and utilization of educational apps and software are in ICT. It explores their varying levels of proficiency and comfort with tools such as word processing software, presentation software, spelling checkers, e-dictionaries, design programmes, and virtual classroom platforms. While some teachers, like Harish, demonstrate confidence and effective usage of these tools for teaching and learning, others, such as Rita and Gita, have limited exposure and rely more on traditional teaching methods. The text underscores the importance of these digital tools in modern education while highlighting English language teachers' differing perspectives and experiences.

Internet Surfing

Within the context of investigating the dominions of internet surfing among the English language teachers of Achham, Bajhang, and Kailali, this qualitative study engaged six English language teachers. They were asked questions about their knowledge in internet surfing regarding the use of the Google site for authentic ELTL materials, sending and receiving an SMS, email, etc., Web-Based Applications (e.g. *YouTube*,) in teaching and learning, editing text online, developing a questionnaire in online, searching the information on the Internet, participating in social networks (e.g. Facebook, YouTube, Viber, Skype, WhatsApp), downloading or uploading curriculum resources from website or learning platform for students to use. Umesh knew most of the teaching-learning activities by using ICT tools in searching the internet. He knew that activities learning in Google and the export online or physically. But he said he did not apply what he knew in the classroom. He only used one-third activities because the school has no ICT-friendly environment. So, nobody took an interest in using them, so they only used mobile for Facebook, chat, WhatsApp, and email, not for pedagogical purposes but they used only for personal purposes or entertainment. He explained;

Yes, I am familiar with using the internet. I know about doing educational things like looking up material on Google, sending messages through SMS and email, and using platforms like Facebook, YouTube, Viber, Skype, and WhatsApp. However, I have yet to use these things a lot in my teaching. Sometimes, I only use them a little bit. I do understand they can help teach English. When they are used, teaching and learning can improve, and the classroom can become more fun and technology-friendly. When I use them, I

feel more comfortable using different teaching methods, which makes my classroom more interesting.

In the same line, Harish and Rita expressed their view about internet surfing. They are confident in some internet surfing for teaching learning. The same is true in Umesh; they rarely use them in the classroom. They asked why they did not use them properly in the classroom. One of them, Harish expressed,

I explore reliable online materials and other relevant resources when creating educational content. I assist students in navigating internet searches, adding excitement and enjoyment to my classes. However, incorporating this approach consistently into the classroom setting is only sometimes feasible.

However, Shambhu, Gita, and Ramesh possess limited experience in internet browsing. They seldom integrate internet searches into their classroom activities. They seemed uninterested when I inquired about their internet usage and provided brief responses. Nonetheless, they emphasized the significance of ICT for classroom use. One of them Ramesh explored;

Certainly, I am familiar with a few teaching activities that involve internet searches. However, I have rarely used them in the classroom. My list of such activities is limited, and I recognize the need for further training to enhance my Internet search skills. I believe that Information and Communication Technology (ICT) plays a crucial role in effective teaching while reading also holds great significance within the classroom environment.

In summary, the study explores the internet surfing practices of English language teachers, focusing on Umesh, Harish, Rita, Shambhu, Gita, and Ramesh. Umesh has extensive knowledge of ICT tools for teaching and learning, particularly in Google, but faces challenges applying this knowledge

in the classroom due to a lack of an ICT-friendly environment. Harish and Rita express confidence in internet surfing for teaching but note difficulties in consistent integration. Shambhu, Gita, and Ramesh exhibit limited internet browsing experience, rarely incorporating it into their teaching activities. Despite this, all teachers recognize the importance of ICT in effective teaching, with Ramesh emphasizing the need for further training. The study highlights varying degrees of internet usage among teachers, reflecting challenges and opportunities for incorporating technology into teaching practices.

ICT in the Pedagogical Practices

Within the context of investigating the dominions of pedagogical practices in the English language teachers of Achham, Bajhang, and Kailali, this qualitative study engaged with six English language teachers. The teachers shared their perspectives on using ICT for personal learning and teaching. They discussed employing collaborative learning, using ICT to communicate ideas and processes in English, and solving language problems such as spelling and meaning. They highlighted various teaching methods, including direct instruction, discovery learning, and approaches that enhance English language content. They emphasized teaching topics that benefit from specific methods, incorporating authentic tasks through project-based learning, and developing students' problem-solving skills through inquiry-based learning. Additionally, they mentioned producing texts using word processing programs, advising students on internet use for English learning, discussing ethical issues in using digital resources, and effectively blending ICT tools in face-to-face teaching. For instance, Harish displayed his knowledge of ICT use in pedagogical practices. He is convinced that ICT tools facilitate teachers' teaching and learning more effectively in the ELT

classroom. He seemed confident in this subject matter. He spoke openly and frequently smiled, effectively using body language to convey his points. He elaborated,

I use technology, like computers and the internet, to make learning English more interesting and fun. I use online tools that help students work together and show them videos and pictures to explain English ideas better. Also, I teach them how to use the internet responsibly and find good information. By mixing traditional teaching with these new tools, my students learn English in a cool and helpful way that prepares them for the modern world.

In the same line, Umesh and Rita expressed a similar level of knowledge of ICT used in teaching and learning. Both of them, generally, used ICT when they taught English by using ICT in methodology. One of them Umesh expressed;

In my English teaching, I use computers and technology to make lessons more interesting and effective. I use special software and tools to create interactive activities that help my students understand grammar and vocabulary better. I also do collaborative projects online, which adds an exciting dimension to learning English. It's like adding a special ingredient to our lessons, like a secret ingredient in a recipe. I integrate online quizzes and games like puzzles to make learning English enjoyable and engaging. This way, my students practice their language skills without even realizing it.

But Shambhu and Ramesh had better knowledge than Harish, Umesh, and Rita. They have yet to use ICT in classroom teaching and learning. It means that they had sufficient knowledge. When I asked them about the use of ICT in pedagogy practices, they did not seem less interested. One of them, Shambhu expressed,

I use computers and things like the Internet to help me teach English. With special programmes, I can make lessons more interesting, and my students can learn better. We also do material together online to learn English in a fun way. It's like adding something nice to our lessons, like a special ingredient in cooking. I use online quizzes and games to make learning English feel like a game, so my students can practice and have fun simultaneously.

However, Gita needed to gain more knowledge about the competence of using ICT in pedagogical language teaching. She explained;

I sometimes use computers and technology to teach English in the classroom. I make lessons with special programmes that make learning fun and help my students understand grammar and words better. I do things together on the internet to learn English coolly. It's like adding something special to our lessons, like a surprise ingredient when cooking. I use online quizzes and games to make learning English feel like a game so my students can practice while having fun.

In summary, the teachers varied in their knowledge and usage of ICT. Harish demonstrated a strong understanding of ICT's potential, emphasizing how he uses computers and online tools to engage students, show videos, and teach responsible internet use. Umesh and Rita highlighted their use of special software for interactive lessons, collaborative projects, and online quizzes to enhance English learning. However, Shambhu and Ramesh have knowledge and experience with ICT, using it occasionally to create engaging lessons. Gita, on the other hand, had minimal awareness of ICT's role in pedagogy. While some teachers exhibited advanced ICT integration, others demonstrated basic familiarity or limited engagement in utilizing technology to enhance English language education.

Summary of the Qualitative Results on the Knowledge of Using ICT

The study focused on investigating the use of internet surfing among English language teachers in the Achham, Bajhang, and Kailali regions. Six teachers participated, sharing their experiences with various aspects of internet usage for teaching and learning. Umesh demonstrated a strong understanding of internet-based teaching activities, particularly utilizing Google and online content sharing. However, due to a lack of an ICT-friendly environment in his school, he found it challenging to implement these methods effectively in the classroom. Despite recognizing the potential benefits, he and his colleagues, Harish and Rita, needed help with consistent integration.

Gita and Ramesh displayed limited engagement with internet browsing, showing unwillingness to incorporate it into their teaching practices fully. They acknowledged the importance of ICT but needed help to utilize its advantages. Like the others, Ramesh recognized the potential of internet searches for teaching, though he also highlighted the need for further training to enhance his skills. Overall, the study underscores the importance of providing ongoing support and training to teachers to effectively utilize Internet resources for educational purposes, considering the varying levels of familiarity and challenges they encounter.

Merged and Compared Results of Quantitative and Qualitative Data: Joint Display of Teachers' Level of Knowledge

The joint display of teachers' level of knowledge integrates both quantitative and qualitative results, as presented separately at first and then combined later which is illustrated in the following table:

Table 17*Joint Display of Teachers' Level of Knowledge*

Sub-dimension	Quantitative Findings	Qualitative Findings	Combined Result
Familiarizing with hardware usage	Operating computer, Tablet/ Mobile (Mean=3.88)- High. Preparing digital material to use with an Interactive whiteboard (Mean= 3.9) – Medium. Significant differences in district, employment status, and training status	Teachers express confidence and ease in using computers, tablets, and mobile devices. Teachers feel less capable and need more training on using interactive whiteboards.so, most of the participants expressed familiarity with a variety of ICT devices. Some participants, like Harish, displayed a good understanding of various devices, while others, like Gita, had limited familiarity due to their usage patterns in the classroom.	Teachers show varying levels of ICT proficiency, with significant differences based on district, qualifications, resources, and training. While most of them are confident with basic ICT tools, there is a need for more training, especially for interactive whiteboards. Effective integration of traditional and digital methods is essential for enhancing student engagement and learning outcomes.
Fundamental concept of digital devices / ICT literacy of digital devices	Basic operating computer (using a keyboard, mouse, etc. (mean = 3.98) - High. Searching for the saved data on the hard disk (mean =2.77) Significant differences in district, training status	Teachers expressed the various levels of the basic concept of digital devices. Others like Umesh and Rita also had a good in fundamental digital device concepts and could use them effectively in their personal and professional lives. In contrast, Ramesh and Gita had a more basic understanding.	While most of the teachers demonstrate high proficiency in basic computer operations, there is a medium level of proficiency in searching for saved data, with significant differences based on district and training. The qualitative data highlights that some teachers are well-versed in using digital devices, while others have a more fundamental understanding.
Educational apps and software	Using word processing software (mean =3.74)- High. Using the	It explores their varying levels of proficiency and comfort with tools such as word processing software,	The use of ICT tools in English language teaching is moderate, with significant

	<p>plagiarism software (Mean =2.78)</p> <p>Significant differences in district, qualification, having digital devices, availability of digital resources in school, and training status.</p>	<p>presentation software, spelling checkers, e-dictionaries, design programs, and virtual classroom platforms.</p> <p>While some teachers, like Harish, expose confidence and effective usage of these tools for teaching and learning, others, such as Rita and Gita, have limited exposure and rely more on traditional teaching methods</p>	<p>differences in integration based on location, resources, and training. While most of the teachers are confident and knowledgeable in using ICT, some use more traditional methods due to limited exposure.</p>
Internet surfing	<p>Using sending and receiving SMS, email, etc. (Mean= 3.73)</p> <p>Editing text online (mean =3.03)</p> <p>Significant differences in district, qualification, having digital devices, availability of digital resources in school, and training status.</p>	<p>The findings highlight the varying degrees of internet usage and ICT integration among teachers, with more experienced teachers like Umesh, Harish, and Rita showing higher knowledge and confidence but less experienced teachers like Shambhu, Gita, and Ramesh.</p>	<p>The quantitative results indicate a medium level of use of ICT tools in English language teaching classrooms, with significant differences based on district, resource availability, and teacher training. The qualitative data underscores the importance of these tools in improving student engagement and learning outcomes, highlighting diverse approaches and perceptions among English teachers. Additionally, the significance of a supportive classroom environment that integrates both traditional and digital methods is emphasized, enhancing overall student involvement and interaction.</p>
ICT in pedagogical practices	<p>Suggesting to the students about ethical issues in using digital</p>	<p>Harish, Umesh, and Rita have considerable knowledge and confidence in using ICT tools for</p>	<p>The combined quantitative and qualitative results indicate a medium level</p>

resources (mean 3.52)- Medium. Making a good blend of ICT tools in face-to-face teaching (mean 3.04). Significant differences in district, qualification, having digital devices, availability of digital resources in school, and training status.	English language teaching but Shambhu and Ramesh possess adequate ICT knowledge but show limited interest and occasional use in their teaching,	of use of ICT tools in English language teaching classrooms, with significant differences based on district, resource availability, and teacher training. The qualitative data highlights the importance of these tools in improving student engagement and learning outcomes, highlighting diverse approaches and perceptions among English teachers. Additionally, the significance of a supportive classroom environment that integrates both traditional and digital methods is emphasized, enhancing overall student involvement and interaction.
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Merged and compared results: The quantitative analysis revealed that secondary-level English language teachers showed moderate familiarity with hardware and fundamental digital concepts. This familiarity was influenced by various factors such as district, qualification, experience, employment status, availability of digital resources, and ICT training. These findings align with qualitative data, where teachers like Umesh demonstrated an understanding of these concepts but faced significant challenges in practical implementation due to a lack of an ICT-friendly environment. The moderate level of familiarity observed in the quantitative analysis is reflected in the real-world experiences of the teachers, who, despite their knowledge, struggle to implement ICT effectively in their classrooms due to environmental restrictions.

Teachers showed medium-level knowledge of educational apps and software usage, with significant impacts from qualifications, availability, and condition of digital devices, and ICT training. This medium-level knowledge is corroborated by qualitative insights from Umesh's experience. He is familiar with using Google and online content for teaching but struggles with consistent application due to inadequate support and resources. Similarly, Gita and Ramesh's limited engagement with educational apps highlights the challenges they face in fully incorporating these tools into their teaching practices. The qualitative data underscores the importance of providing adequate resources and training to enhance teachers' ability to utilize educational apps and software effectively.

Regarding internet surfing ability and ICT integration in teaching, quantitative data indicated a medium-level understanding. This understanding was influenced by factors such as district, experience, employment status, availability of digital devices, condition of digital resources and ICT training. The qualitative findings support this medium-level understanding, as teachers like Umesh recognize the potential of internet-based teaching but face practical obstacles that prevent effective integration. Gita and Ramesh's reluctance to fully incorporate internet browsing into their teaching practices, despite acknowledging its importance, further highlights the gap between recognizing the potential benefits of ICT and being able to utilize it effectively. This gap emphasizes the need for further training and support to bridge the divide between knowledge and practical application.

Overall, the merged results of quantitative and qualitative data present a comprehensive picture of secondary-level English language teachers' ICT knowledge and practices. While teachers show moderate to medium-level familiarity with ICT tools and concepts, practical challenges, environmental factors, and the need for

ongoing support and training are crucial for effective integration. The alignment between quantitative influences and qualitative experiences underscores the importance of addressing these challenges to enhance ICT usage in English language teaching. This combined analysis emphasizes that improving ICT integration in education requires not only enhancing teachers' knowledge but also providing the necessary support and resources to overcome practical barriers.

Interpretation Level of Knowledge of Teachers on ICT

. The quantitative analysis assessed secondary-level English language teachers' knowledge and use of ICT. The evaluation focused on their familiarity with hardware, fundamental digital concepts, educational apps and software, internet surfing ability, and ICT integration in teaching. The results indicated that teachers showed a moderate level of familiarity with hardware and fundamental digital concepts. This familiarity varied based on demographic factors such as district, qualification, experience, employment status, availability of digital resources, and ICT training. These variations suggest that teachers' background and access to resources significantly influence their ICT knowledge.

Similarly, teachers demonstrated a medium-level knowledge of educational apps and software. Significant factors influencing this knowledge included their qualifications, availability of digital devices, condition of digital resources, and ICT training. This finding indicates that teachers' ability to use educational apps and software is closely tied to their educational background and the quality of ICT resources they can access.

Likewise, teachers had a medium-level understanding of how to search the internet and integrate ICT into their teaching practices. The understanding was significantly impacted by factors such as district, experience, employment status,

availability of digital devices, condition of digital resources, and ICT training. This suggests that teachers' internet proficiency and their ability to integrate ICT into teaching are influenced by similar factors affecting their overall ICT knowledge.

The qualitative study explored the practical use of internet surfing among English language teachers in the Achham, Bajhang, and Kailali regions through interviews with six teachers. Umesh demonstrated a strong understanding of internet-based teaching activities, particularly using Google and online content sharing. However, he faced significant challenges in implementing these methods effectively in the classroom due to a lack of an ICT-friendly environment. This indicates a gap between theoretical knowledge and practical application, largely influenced by the school's infrastructure and support systems.

Similarly, Umesh, along with his colleagues Harish and Rita, recognized the potential benefits of ICT but struggled with consistent integration. This inconsistency highlights the need for more robust support and infrastructure to facilitate the regular use of ICT in teaching.

Furthermore, Gita and Ramesh displayed limited engagement with internet browsing and were unwilling to fully incorporate it into their teaching practices. Despite acknowledging the importance of ICT, they struggled to utilize its advantages, primarily due to a lack of sufficient training and support. Ramesh specifically pointed out the need for further training to enhance his skills. This underscores the necessity of ongoing professional development to help teachers become more comfortable and proficient with ICT tools.

In conclusion, the combined interpretations of the quantitative and qualitative data provide a comprehensive understanding of secondary-level English language teachers' ICT knowledge and practices. While the quantitative data reveals a moderate

to medium level of ICT knowledge influenced by various demographic and resource-related factors, the qualitative data adds depth by highlighting practical challenges and the need for better support and training. The alignment between the two data sets underscores the importance of addressing both the theoretical and practical aspects of ICT integration in teaching. This comprehensive approach is essential to enhance the effective use of ICT in English language education, ultimately benefiting both teachers and students.

Chapter Summary

In this chapter, the first objective or research question—assessing the level of knowledge of ICT among secondary-level English language teachers based on their self-assessment/self-reported data—was addressed. The study observed secondary-level English language teachers' knowledge of ICT through several key areas: familiarity with hardware usage, understanding of fundamental concepts on digital devices, knowledge of educational apps and software for language teaching, internet surfing skills, and the pedagogical use of ICT. These areas were examined to determine how well teachers could integrate ICT into their teaching practices and enhance the learning experience for their students.

To provide a comprehensive understanding, both quantitative and qualitative research designs were employed. The quantitative aspect focused on measuring the extent of teachers' familiarity and usage of various ICT tools, while the qualitative aspect delved into the teachers' experiences, perceptions, and challenges in using ICT for educational purposes. The findings from this chapter highlight the current state of ICT knowledge among secondary-level English language teachers, identifying both strengths and areas needing improvement.

Chapter Five

Perceptions of ICT by English Language Teachers

In this chapter, I have attempted to address the research questions (RQ 2 and 3) on the perception of ICT by secondary-level English language teachers. For this, secondary-level English language teachers' perception of ICT was observed in terms of ICT as a tool for motivation, pedagogical practices, professional development, and self-learning.

Teachers' Perceptions Towards the Use of ICT

English teachers' perception of using ICT in the ELT classroom is complicated and can vary widely. Some teachers embrace ICT as a valuable tool that improves language learning, fosters student engagement, and facilitates effective communication. They view it as a means to access authentic language resources and interactive activities, enabling personalized learning experiences. These teachers recognize the importance of integrating technology to prepare students for the digital age. On the other hand, some teachers may exhibit reservations or reluctance towards ICT, perceiving it as a potential distraction, a challenge to traditional teaching methods, or a source of technical complexities. This group may feel uncertain about the optimal integration of ICT in language instruction and require additional training and support. Understanding and addressing the various perceptions of English teachers towards ICT in the ELTL classroom is crucial for promoting successful implementation and maximizing its possibility for enriched language learning experiences.

Results of Quantitative Data

In this section, secondary-level English language teachers' perceptions of ICT were quantitatively observed and analyzed regarding ICT as a tool for motivation,

SEL-learning / individual learning, pedagogical activities, and professional development.

ICT as a Tool for Motivation

The use of ICT in the English language class can be utilized to excite and motivate students for their effective learning. For exploring the classroom realities of Achham, Bajhang, and Kailali, 222 English language teachers were asked questions regarding the use of ICT for making the activities interesting and enjoyable, fostering a positive attitude of students towards learning, creating the teaching-learning atmosphere, increasing the students' motivation, making the class more comprehensive, enhancing the students' independence in learning, reducing the drop-out rate and class-repetition rate, increasing the regularity in the class, increasing the enrolment of the students, and providing the convenience in monitoring students' learning progress. It can be presented in Table 18 as follows.

Table 18

ICT as a Tool for Motivation (n=222)

Statement	Percentage					Mean	SD	Level
	SD	D	A	SA	UD			
It makes learning activities interesting and enjoyable.	1.8	5.9	6.8	32.4	53.2	4.29	0.96	High
It helps to foster positive attitudes of students toward learning.	1.4	4.5	6.3	42.3	45.5	4.26	0.87	High
It makes it easy to control the classes	4.5	6.3	9.5	38.7	41.0	4.05	1.08	High
It can increase students'	2.3	5.0	4.1	42.8	45.9	4.25	0.92	High

motivation									
It gives the students a better understanding	3.6	6.8	8.1	36.5	45.0	4.13	1.06	High	
It enhances learners' independence in learning.	2.7	6.3	13.5	31.5	45.9	4.12	1.04	High	
It helps to decrease the class repetition rate of students	4.5	5.9	6.3	46.4	36.9	4.05	1.04	High	
It helps to increase the attendance rate of students	3.2	7.7	11.3	30.2	47.7	4.12	1.08	High	
It helps to decrease the dropout rate of the students	2.3	4.1	7.7	45.9	40.1	4.18	0.90	High	
It helps to increase the enrolment rate of students	2.3	4.5	7.2	50.5	35.6	4.13	0.89	High	
It provides convenience in monitoring students' learning progress.	2.3	5.0	7.2	40.1	45.5	4.22	0.94	High	
Total						4.16	0.76	High	

The overall results of Table 18 show that perceptions of English teachers towards ICT as a tool for motivation were high (Mean=4.16, SD=0.76). Based on the item-wise result, the perception level of English teachers was found to be comparatively high in learning activities interesting and enjoyable (Mean=4.29, SD=0.96) and low in making easy to control the classes (Mean=4.05, SD=1.08) and helping to decrease the class repetition rate of students (Mean=4.05, SD=1.04) respectively. Further, the item-wisely status helping to foster positive attitudes of students towards learning (Mean=4.26, SD=0.87), increasing students' motivation

Temporary	149	4.23	0.68	
Having digital devices				
No	82	4.21	0.71	0.52
Yes	140	4.14	0.79	
Availability of digital resources in school				
Poor	40	4.24	0.49	0.02*
Moderate	81	4.05	0.84	
Good	93	4.28	0.72	
Very good	8	3.52	1.13	
Training status				
No	129	4.15	0.78	0.79
Yes	93	4.18	0.74	

**p-value* ≤ 0.05 (i.e. Significant)

In Table 19, ICT as a tool for motivation in Bajhang district (Mean= 4.48, SD= 0.58) was found to be higher than in Kailali district (Mean= 4.21, SD= 0.70) in ICT as a tool for motivation and Achham district (Mean= 3.81, SD= 0.85). However, the p-value was found to be less than 0.05 ($p=0.00$). Thus, the result is significant, i.e., there is a significant difference among districts as a tool for motivation.

Qualification-wise, the tool for motivation of participants having master/MPhil (Mean= 4.16, SD= 0.74) qualification was found to be higher than those teachers having bachelor level (Mean= 4.16, SD= 0.84) qualification. However, the p-value was more than 0.05 ($p=0.99$). Thus, the result is insignificant, i.e., there is no role of qualification in determining the perception of teachers towards ICT as a tool for motivation.

Based on the experience of respondents, the as a tool for motivation having experience 5-10 years (Mean= 4.23, SD= 0.65) was found to be higher than experience more than 15 years (Mean= 4.16, SD= 0.78), less than 5 years (Mean= 4.13, SD= 0.89) and 11-15 years (Mean= 4.04, SD= 0.87). Yet, the p-value was more

than 0.05 ($p= 0.58$). Hence, the result is insignificant, i.e. there is no significant difference based on respondents' experience as a tool for motivation.

Based on employment status, the tool for motivation of temporary respondents (Mean= 4.23, SD= 0.68) was higher than permanent respondents (Mean= 4.03, SD= 0.90). However, the p-value was found to be more than 0.05 ($p= 0.08$). Thus, the result is insignificant, i.e., there is no significant difference based on the employment status of respondents.

ICT as a tool for motivating respondents with no digital devices (Mean= 4.21, SD= 0.71) was higher than respondents with digital devices (Mean=4.14, SD=0.79). However, the p-value was more than 0.05 ($p=0.52$). Hence the availability of digital resources to the participants has no role in determining the perception of teachers towards ICT as a tool for motivation.

Availability of digital resources in good condition in school, their ICT as a tool for motivation (Mean= 4.28, SD= 0.72) was found to be higher than digital resources poor (Mean= 4.24, SD= 0.49), moderate (Mean= 4.05, SD= 0.84) and very good (Mean=3.52, SD=1.13). However, the p-value was less than 0.05 ($p=0.02$). Hence, the result is significant, and the results favor those teachers having good condition of digital resources at their schools.

The teachers who had ICT-related training and their ICT as a tool for motivation (Mean= 4.18, SD= 0.74) were found to be higher than the respondents who had no training (Mean= 4.15, SD= 0.78). Yet, the p-value was more than 0.05 ($p=0.79$). Thus, there is no role of ICT-related training in determining teachers' perception of ICT as a tool for motivation.

ICT as a Tool for Pedagogical Activities

The use of ICT in the English language class can be utilized by teachers for effective learning. For exploring the classroom realities of Achham, Bajhang, and Kailali, 222 English language teachers were asked questions regarding the use of ICT for making the learning process more effective, replacing teachers' role in teaching English, more effective for teaching and learning than books and other printed materials, making learning activities is quite easy and is not troublesome, providing convenience in meeting the needs of learning resources, making teaching and learning easier, faster, accessible and fun for teachers to explain the concept of the lesson, teaching English more confidence on the computer, making effectiveness in developing language skills and aspects of English, improving the presentation of materials for my lessons, facilitating increase the quality of education, facilitating increase the quality of education, increasing the student's achievement, and providing convenience in storing teachers' and students' documents. The results of this part can be presented in Table 20.

Table 20

ICT as a Tool for Pedagogical Activities (n=222)

Statement	Percentage					Mean	SD	Level
	SD	D	A	SA	UD			
It makes the learning process more effective.	2.7	4.5	10.8	59.0	23.0	3.95	0.87	High
It replaces teachers' role in teaching English.	3.2	5.9	10.4	48.2	32.4	4.01	0.97	High

It is more effective for teaching and learning than books and other printed materials.	1.8	5.0	5.9	59.0	28.4	4.07	0.84	High
The use of ICT in learning activities is quite easy and is not troublesome.	5.9	5.0	5.9	56.3	27.0	3.94	1.03	High
It provides convenience in meeting the needs of learning resources.	4.1	2.7	3.6	64.0	25.7	4.05	0.88	High
It makes teaching and learning easier, faster, accessible, and fun for teachers to explain the concept of the lesson.	2.3	4.1	6.3	57.2	30.2	4.09	0.85	High
It is more effective for teaching and learning than books and other printed materials.	4.1	4.1	3.2	60.4	28.4	4.05	0.92	High
I feel confident to teach English on the computer	2.7	3.6	7.7	57.7	28.4	4.05	0.86	High
It seems effective in	2.7	3.6	5.0	66.2	22.5	4.02	0.82	High

developing language skills and aspects of English									
ICT improves the presentation of materials for my lessons	3.2	3.2	7.7	65.8	20.3	3.97	0.83	High	
It helps to increase the quality of education	3.2	4.5	3.6	59.5	29.3	4.07	0.89	High	
It helps to increase the student's achievement	2.7	3.2	3.6	60.4	30.2	4.12	0.83	High	
It provides convenience in storing teachers' and students' documents	4.5	2.3	10.4	37.8	45.0	4.17	1.01	High	
Total						4.04	0.59	High	

The overall results of table 20 show that perceptions of English teachers towards ICT as a tool for pedagogical activities were high (Mean=4.04, SD=0.59). Based on the item-wise result, the perception level of English teachers was found to be comparatively high in providing convenience in storing teachers' and students' documents (Mean=4.17, SD=1.01) and low in the use of ICT in learning activities is quite easy and is not troublesome (Mean=3.94, SD=1.03). The table further shows that item-wise results make the learning process more effective (Mean=3.95, SD=0.87), replaces teachers' role in teaching English (Mean=4.01, SD=0.97), more effective for teaching and learning than books and other printed materials

(Mean=4.07, SD=0.84), provides convenience in meeting the needs of learning resources (Mean= 4.05, SD=0.88), makes teaching and learning easier, faster, accessible and fun for teachers to explain the concept of the lesson (Mean=4.09, SD=0.85), more effective for teaching and learning than books and other printed materials (Mean=4.05, SD=0.92), feel confident to teach English on the computer (Mean=4.05, SD=0.86), seems effective in developing language skills and aspects of English (Mean=4.02, SD=0.82), ICT improves the presentation of materials for my lessons (Mean=3.97, SD=0.83), helps to increase the quality of education (Mean=4.07, SD=0.89), helps to increase the student's achievement (Mean=4.12, SD=0.83) was found to be high in each case.

ICT as a Tool for Pedagogical Activities From a Demographic

Perspective. Teachers' perception of ICT as a tool for pedagogical activities was analyzed from different demographic perspectives such as districts, qualifications, experiences, employment status, having digital devices, availability of digital resources in the schools, and training status. The results of this section are detailed and presented in Table 21.

Table 21

ICT as a Tool for Pedagogical Activities From a Demographic Perspective (n=222)

Variables	Frequency	Mean	SD	p-value
Districts				
Achham	71	3.91	0.53	0.05*
Bajhang	67	4.16	0.65	
Kailali	84	4.06	0.56	
Qualification				
Bachelor	47	4.25	0.35	0.01*
Master/MPhil	175	3.99	0.62	
Experience				
Less than 5 years	34	4.17	0.60	0.42

5 - 10 years	97	3.98	0.50	
11 - 15 years	44	4.03	0.60	
More than 15 years	47	4.09	0.71	
Employment Status				
Permanent	73	3.95	0.65	0.12
Temporary	149	4.09	0.55	
Having digital devices				
No	82	4.05	0.55	0.94
Yes	140	4.04	0.61	
Availability of digital resources in school				
Poor	40	4.12	0.43	0.65
Moderate	81	4.01	0.61	
Good	93	4.02	0.63	
Very good	8	4.20	0.55	
Training status				
No	129	4.02	0.61	0.43
Yes	93	4.08	0.56	

In Table 21, ICT as a tool for pedagogical activities in Bajhang district (Mean= 4.16, SD= 0.65) was found to be higher than in Kailali district (Mean= 4.06, SD= 0.56) in ICT as a tool for pedagogical activities and Achham district (Mean= 3.91, SD= 0.53). However, the p-value was equal to 0.05 ($p=0.05$). Thus, the result is significant in favor of the teachers of Bajhang district.

Based on qualification, the ICT as a tool for pedagogical activities of teachers with bachelor level (Mean= 4.25, SD= 0.35) qualification was found to be higher than those teachers having Master/MPhil (Mean= 3.99, SD= 0.62) qualification. Moreover, the p-value was found to be less than 0.05 ($p=0.01$). Thus, the result is significant indicating that the qualification of teachers has a significant role in determining the

perception of teachers in the ICT as a tool for pedagogical activities in favor of the teachers with bachelor qualifications.

Based on the experience of respondents, the ICT as a tool for pedagogical activities having experienced less than 5 years (Mean= 4.17, SD= 0.60) was found to be higher than experience more than 15 years (Mean= 4.09, SD= 0.71), 11-15 years (Mean= 4.03, SD= 0.60) and 5-10 years (Mean= 3.98, SD= 0.50). The p-value was found to be more than 0.05 ($p= 0.42$). Hence experience has no significant role in determining the perception of teachers in the ICT as a tool for pedagogical activities in favor of the teachers with bachelor qualifications.

Based on employment status, the ICT as a tool for pedagogical activities of temporary teachers (Mean= 4.09, SD= 0.55) was found to be higher than permanent teachers (Mean= 3.95, SD= 0.65). However, P- the value is $p= 0.12 > 0.05$. Thus, the result is insignificant, i.e., there is no significant difference based on the employment status of teachers.

ICT as a tool for pedagogical activities of respondents with no digital devices (Mean= 4.05, SD= 0.55) was higher than respondents with digital devices (Mean=4.04, SD=0.61). However, the p-value was more than 0.05 ($p=0.94$). Hence, the result is insignificant, i.e., there is no significant difference based on the availability of digital devices for the teachers.

Availability of digital resources in very good condition at school in ICT as a tool for pedagogical activities (Mean= 4.20, SD= 0.55) was found to be higher than digital resources poor (Mean= 4.12, SD= 0.43), good (Mean= 4.02, SD= 0.63) and moderate (Mean= 4.01, SD= 0.61). However, the p-value was more than 0.05 ($p=0.65$). Hence, the result is insignificant, indicating that the mean score is not significantly different.

The teachers trained in ICT who have ICT as a tool for pedagogical activities (Mean= 4.08, SD= 0.56) were found to be higher than the respondents who have no training (Mean= 4.02, SD= 0.61). Yet, the p-value was more than 0.05 (p=0.43). Hence, ICT-related training has no significant role in determining teachers' perception of ICT as a tool for pedagogical activities.

ICT as a Tool for Self-Learning

Using technology like computers, the internet, etc., makes learning more exciting and helps for better and more effective self-learning. For exploring realities, on the self-learning of Achham, Bajhang, and Kailali, 222 English language teachers were asked questions regarding the use of ICT for providing convenience in communication, suggesting internet surfing for English Language learning, suggesting students ethical issues using digital resources in English Language teaching and learning, highly needed by teachers in teaching English, making it easy for teachers to explain the concept of the lesson taking enjoy using computers to learn English, developing documents, notes, etc. These activities provide self-learning and enhance the use of ICT effectively. The result can be shown in the following Table 22.

Table 22

ICT as a Tool for Self-learning (n=222)

Statement	Percentage					Mean	SD	Level
	D	A	SA	UD				
It provides convenience in communication.	3.2	3.6	5.9	59.0	28.4	4.06	0.88	High
It suggests internet surfing for English Language learning.	2.7	3.2	6.8	57.2	30.2	4.05	0.92	High
It suggests to students about	4.1	6.3	5.9	37.8	45.9	4.09	0.86	High

ethical issues using digital resources in English Language teaching and learning.	2.3	5.9	3.6	59.9	28.4	4.15	1.06	High
It is highly needed by teachers in teaching English.	2.3	5.9	3.6	59.9	28.4	4.15	1.06	High
It makes it easy for teachers to explain the concept of the lesson.	3.6	5.4	5.4	57.2	28.4	4.06	0.87	High
I enjoy using computers to learn English.	2.7	3.6	8.1	43.7	41.9	4.01	0.94	High
It helps to develop documents, notes, etc.	3.2	3.2	4.1	66.7	23.0	4.18	0.93	High
Total						4.09	0.67	High

The overall results of Table 22 show that teachers' perception of ICT as a tool for self-learning was high (Mean=4.09, SD=0.67). Based on the item-wise result, the perception level of English teachers was comparatively high in helping to develop documents, notes, etc. (Mean=4.18, SD= 0.93) and low in enjoying using computers to learn English (Mean=4.01, SD=0.94). Furthermore, the level of perception was found to be high in the case of all items as it provides convenience in communication (Mean=4.06, SD=0.88), suggesting internet surfing for English language learning (Mean=4.05, SD=0.92), suggesting students about ethical issues using digital resources in English language teaching and learning (Mean=4.09, SD=0.86), highly needed by teachers in teaching English (Mean=4.15, SD=1.06), and making it easy for teachers to explain the concept of the lesson (Mean=4.06, SD=0.87).

ICT as a Tool for Self-learning From a Demographic Perspective.

Teachers' perception of ICT as a tool for self-learning was analyzed from different

demographic perspectives such as district, qualification, experiences, employment status, having digital devices, availability of digital resources in the schools, and training status. The results of this section are detailed and presented in Table 23.

Table 23

ICT as a Tool for Self-learning From a Demographic Perspective (N=222)

Variables	Frequency	Mean	SD	P-value
Districts				
Achham	71	3.80	0.75	0.00*
Bajhang	67	4.32	0.58	
Kailali	84	4.14	0.57	
Qualification				
Bachelor	47	4.28	0.60	0.02*
Master/MPhil	175	4.03	0.67	
Experience				
Less than 5 years	34	4.40	0.42	0.02*
5 - 10 years	97	3.99	0.66	
11 - 15 years	44	4.06	0.73	
More than 15 years	47	4.09	0.70	
Employment Status				
Permanent	73	4.01	0.68	0.22
Temporary	149	4.13	0.66	
Having digital devices				
No	82	4.01	0.70	0.18
Yes	140	4.13	0.64	
Availability of digital resources in school				
Poor	40	4.15	0.52	0.05*
Moderate	81	3.97	0.74	
Good	93	4.19	0.61	
Very good	8	3.75	0.95	
Training status				
No	129	4.04	0.73	0.20
Yes	93	4.16	0.57	

In Table 23, teachers' perception towards ICT as a tool for self-

learning/individual learning in the Bajhang district (Mean= 4.32, SD= 0.58) was found to be higher than in the Kailali district (Mean= 4.14, SD= 0.57) and Achham

district (Mean= 3.80, SD= 0.75). However, the p-value was less than 0.05 ($p=0.00$). Hence, the result is significant, i.e., there is a significant difference among districts in the teachers' perception of ICT as a tool for self-learning/individual learning. In contrast, the result favors the Bajhang district because of having the highest mean value.

Qualification-wise, the teachers' perception towards ICT as a tool for self-learning/individual learning teachers with bachelor level (Mean= 4.28, SD= 0.60) qualification was found to be higher than those having master/MPhil (Mean= 4.03, SD= 0.67) qualification. The p-value was found to be less than 0.05 ($p=0.02$). Hence the result is significant in favor of the teachers with bachelor qualifications because of having a higher mean value.

Based on the experience of respondents, the teachers' perception towards ICT as a tool for self-learning/individual learning having experience less than 5 years (Mean= 4.40, SD= 0.42) was found to be higher than experience with more than 15 years (Mean= 4.09, SD= 0.70), 11- 15 years (Mean= 4.06, SD= 0.73) and 5-10 years (Mean= 3.99, SD= 0.66). The p-value was found to be less than 0.05 ($p= 0.02$). Hence the result is significant in favor of the teachers with experience of less than five years.

Based on employment status, the teachers' perception of ICT as a tool for self-learning/individual learning of temporary respondents (Mean= 4.13, SD= 0.66) was higher than permanent employee respondents (Mean= 4.01, SD= 0.68). However, the p-value was more than 0.05 ($p= 0.22$). Hence, there is no significant difference based on the employment status of respondents.

The teachers' perception of ICT as a tool for self-learning individual learning having digital devices (Mean=4.13, SD=0.64) was higher than respondents having no digital devices (Mean= 4.01, SD= 0.70). However, the p-value was more than 0.05

($p=0.18$). Thus, the result is insignificant, i.e., there is no significant difference based on the availability of digital devices.

Teachers' perception towards ICT as a tool for self-learning/individual learning availability of digital resources with good condition in school (Mean=4.19, SD=0.61) was found to be higher than digital resources poor (Mean= 4.15, SD= 0.52), moderate (Mean= 3.97, SD= 0.74) and very good (Mean= 3.75, SD= 0.95). However, the p-value was less than 0.05 ($p=0.05$). Hence, the result is significant, i.e., there is a significant difference based on the availability of digital resources.

The respondents with ICT-related training teachers' perception of ICT as a tool for self-learning/individual learning (Mean= 4.16, SD= 0.57) was higher than those with no training (Mean= 4.04, SD= 0.73). Yet, the p-value was more than 0.05 ($p=0.20$). Hence, the result is insignificant, i.e., no significant difference between having and no training.

ICT as a Tool for Professional Development

Using technology like computers, the internet, etc. makes learning more exciting and helps for better professional development. For exploring the realities of the professional development of Achham, Bajhang, and Kailali, 222 English language teachers were asked questions regarding the use of ICT for increasing confidence, developing teacher autonomy, enhancing career prospects, discussing teaching ideas, increasing knowledge of different sectors, developing lifelong learning and professional growth increasing knowledge and skills as an English teacher, explaining the concept of the lesson taking enjoy using computers to learn English, developing documents, notes, etc. These activities provide professional development and enhance the use of ICT effectively. The result can be shown in Table 24.

Table 24*ICT as a Tool for Professional Development(n=222)*

Statement	Percentage					Mean	SD	Level
	SD	D	A	SA	UD			
It helps to increase my confidence.	4.1	3.6	4.1	45.5	42.8	4.03	0.83	High
It helps in developing teacher autonomy.	2.7	3.6	5.4	51.4	36.9	4.19	0.97	High
It enhances my career prospects.	2.3	3.2	5.0	41.9	47.7	4.16	0.89	High
It helps me to discuss teaching ideas.	3.2	5.4	5.9	32.4	53.2	4.30	0.88	High
It increases knowledge of different sectors.	2.7	5.9	8.1	62.2	21.2	4.27	1.01	High
It develops lifelong learning and professional growth.	2.3	3.6	5.9	56.3	32.0	3.93	0.88	High
It (referring generally to computers, videos, hardware usage, software, and networks) increases my knowledge and skills as an English teacher.	2.3	26.6	47.3	17.6	6.3	4.12	0.84	High
Total						4.14	0.61	High

The overall results of Table 24 show that teachers' perception of ICT as a tool for professional development was high (Mean=4.14, SD=0.61). Based on the item-wise result, the perception level of English teachers was found to be comparatively high in increasing knowledge of different sectors (Mean=4.27, SD=1.01) and low in developing lifelong learning and professional growth (Mean=3.93, SD=0.88). The level of remaining items was also high as in increasing confidence (Mean=4.03, SD=0.83), developing teacher autonomy (Mean=4.19, SD=0.97), enhancing career prospects (Mean=4.16, SD=0.89), discussing teaching ideas (Mean=4.30, SD=0.88), and increasing my knowledge and skills as an English teacher (Mean=4.12, SD=0.84).

ICT as a Tool for Professional Development From Demographic

Perspective. Teachers' perception of ICT as a tool for professional development was analyzed from different demographic perspectives such as districts, qualifications, experiences, employment status, having digital devices, availability of digital

resources in the schools, and training status. The results of this section are detailed and presented in Table 25.

Table 25

ICT as a Tool for Professional Development From a Demographic Perspective
(n=222)

Variables	Frequency	Mean	SD	P-value
Districts				
Achham	71	3.86	0.69	0.00*
Bajhang	67	4.41	0.48	
Kailali	84	4.17	0.52	
Qualification				
Bachelor	47	4.20	0.62	0.50
Master/MPhil	175	4.13	0.60	
Experience				
Less than 5 years	34	4.28	0.49	0.35
5 - 10 years	97	4.15	0.56	
11 - 15 years	44	4.03	0.69	
More than 15 years	47	4.14	0.68	
Employment Status				
Permanent	73	4.12	0.63	0.72
Temporary	149	4.15	0.60	
Having digital devices				
No	82	4.08	0.68	0.24
Yes	140	4.18	0.56	
Availability of digital resources in school				
Poor	40	4.19	0.52	0.02*
Moderate	81	4.10	0.67	
Good	93	4.22	0.55	
Very good	8	3.54	0.72	
Training status				
No	129	4.12	0.67	0.46
Yes	93	4.18	0.51	

In Table 25, ICT as a tool for professional development in Bajhang district

(Mean= 4.41, SD= 0.48) was found to be higher than in Kailali district (Mean= 4.17, SD= 0.52) and Achham district (Mean= 3.86, SD= 0.69). However, the p-value was found to be less than 0.05 (p=0.00). Hence, the result is significant, i.e., there is a

significant difference among districts in the ICT as a tool for professional development. The result is in favor of the Bajhang district because of having a high mean score.

Qualification-wise, the ICT as a tool for professional development of the teacher with bachelor level (Mean= 4.20, SD= 0.62) qualification was higher than the teachers with Master/MPhil (Mean= 4.13, SD= 0.60) qualification. The p-value was found to be more than 0.05 ($p=0.50$). Hence, the result is insignificant, i.e., no significant difference exists between the perceptions of teachers having bachelor level and master/MPhil level.

Based on the experience of respondents, the use of ICT as a tool for self-learning/individual learning having experience less than 5 years (Mean= 4.28, SD= 0.49) was found to be higher than experience with 5-10 years (Mean= 4.15, SD= 0.56), more than 15 years (Mean= 4.14, SD= 0.68) and 11-15 years (Mean= 4.03, SD= 0.69). The p-value was found to be more than 0.05 ($p= 0.35$). Thus, the result is insignificant i.e., there is no significant difference based on the experience of teachers to use ICT as a tool for professional development.

Based on employment status, the use of ICT as a tool for the professional development of temporary teachers (Mean= 4.12, SD= 0.63) was higher than permanent teachers (Mean= 4.15, SD= 0.60). Yet, the p-value was more than 0.05 ($p= 0.72$). Hence, there is no significant difference Based on the employment of respondents.

The use of ICT as a tool for the professional development of digital devices (Mean=4.18, SD=0.56) was found to be higher than respondents having no digital devices (Mean= 4.08, SD= 0.68). The p-value was found to be more than 0.05

($p=0.24$). Therefore, there is no significant difference based on the availability of digital devices.

ICT as a tool for professional development in the availability of digital resources in good condition at school (Mean= 4.22, SD= 0.55) was found to be higher than digital resources poor (Mean= 4.19, SD= 0.52), moderate (Mean= 4.10, SD= 0.67) and very good (Mean= 3.54, SD= 0.72). The p-value was found to be less than 0.05 ($p=0.02$). Hence there is a significant difference based on the availability of digital resources in favor of the perception of teachers with good condition of digital resources.

The teachers with ICT-related training and their ICT as a tool for professional development (Mean= 4.18, SD= 0.51) were higher than the respondents who had no training (Mean= 4.12, SD= 0.67). The p-value was found to be more than 0.05 ($p=0.46$). Hence there is no significant difference between having training and no training.

Summary of the Quantitative Results on the Perception towards Using ICT

In these comprehensive quantitative results, secondary-level English language teachers perceived the multifaceted role of CT in their teaching. By systematically exploring teachers' viewpoints on ICT as a motivational tool, pedagogical practice, professional development, and self-learning, this survey-based study uncovered valuable insights regarding the teachers' perceptions through the descriptive and inferential analysis of the gathered numerical data and applied statistical techniques.

The findings revealed significant insights in each dimension. Regarding ICT as a tool for motivation, teachers displayed high levels of positive response as it might create interesting and enjoyable activities, foster positive attitudes among students, and enhance overall motivation in an effective teaching-learning atmosphere. It also

offered the English language teachers valuable opportunities for their targeted professional development to further enhance the positive impact of ICT integration on student motivation.

In pedagogical activities, teachers strongly perceived ICT for various purposes, such as making the learning process more effective, replacing traditional teaching methods, enabling personalized learning resources, improving the presentation of materials for lessons, and making effective in developing language skills, indicated room for improvement. Addressing these aspects through targeted strategies can lead to a more comprehensive and effective integration of ICT in pedagogical practices.

Regarding professional development, teachers showed their interest in ICT in improving overall teaching skills, engaging with online courses, positively impacting student engagement through ICT integration, and room for improvement, such as enhancing confidence in utilizing teaching materials effectively. These areas represent valuable targets for professional development initiatives to empower teachers to leverage ICT more confidently in their teaching practices.

The exploration of ICT as a tool for self-learning demonstrated teachers' strong preferences for ICT for self-learning to enhance understanding and innovate in learning methods. Similarly, the analysis of ICT as a tool for teaching learning resources/materials highlighted teachers' perceptions in influencing digital resources to improve teaching materials through personalized resources, access a wider range of teaching ideas, change learning experiences, present opportunities for improvement, emphasize the importance of adapting resources to provide to various learners.

Considering the given demographic dimension provided additional insights into the varying perceptions of teachers. Districts of teaching and having a bachelor's

qualification, for example, showed significant differences in certain dimensions (motivation and professional development). However, most demographic factors did not significantly affect teachers' perceptions. In conclusion, English language teachers generally maintain favorable and various perspectives toward integrating ICT in the classroom.

Results of Qualitative Data

In this section, I conducted a qualitative exploration of the perceptions of secondary-level teachers concerning the multifaceted role of ICT in English language teaching. I carefully observed and analyzed six secondary-level English language teachers' viewpoints/perceptions across a spectrum of dimensions (codes), such as ICT as a tool for motivation, ICT as a tool for pedagogical practices, ICT as a tool for professional development, ICT as a tool for self-learning, and ICT as a tool for teaching learning resources/materials. The variety of dimensions (codes) regarding the perceptions of ICT can be presented as follows.

ICT as a Tool for Motivation

The code examining ICT as a tool for motivation seeks to understand how technology can enhance motivation levels in the context of English language teaching. This analysis is essential given the growing role of ICT in education and its potential to engage students in more compelling ways. By investigating the perceptions of secondary-level English language teachers in districts such as Achham, Bajhang, and Kailali, this code aims to explore how ICT usage impacts various aspects of motivation, including making classroom activities more interesting and enjoyable, encouraging positive attitudes among students, and increasing overall motivation.

The study involved 222 English language teachers in Achham, Bajhang, and Kailali, examining the use of ICT to enhance motivation and learning outcomes. By

analyzing teachers' perspectives, the research focused on utilizing technology to create engaging classroom activities, encourage positive attitudes, and increase motivation, contributing to a comprehensive and effective teaching-learning environment. The study acknowledges the significance of ICT's role in education, aiming to influence its potential for improving student motivation and learning experiences.

The most of the participants described that the use of ICT could motivate the students in the language class since ICT as a new technology could bring a new taste in the classroom, attract the learners, present the language items in the classroom variously, use the colorful and illustrated multimedia presentations that might motivate the students very effectively. Furthermore, these varied perspectives highlight the range of beliefs among teachers regarding ICT as a motivational tool. Harish, for example, described that some English language teachers like ICT as dynamic devices, and some take them as disturbing and irritating. To him, ICT can be adapted as a dynamic material in the English language class to motivate the students. He shared:

I believe ICT is a powerful motivational tool. When I incorporate multimedia elements like videos, interactive quizzes, and online discussions into my lessons, I see increased student engagement and enthusiasm. It helps make the learning experience more dynamic and relevant, capturing their attention and motivating them to participate actively.

Regarding the use of ICT, Umesh doubted the appropriate use of ICT in English language classrooms and worried about the misuse of ICT that might distract the students' attention. He gave examples of schools in his location that did not allow

the students to bring mobile phones to their schools. However, the balance and appropriate use of ICT would be fruitful. He further described:

While I recognize the potential of ICT, I'm not entirely convinced it always leads to increased motivation. It can be distracting, and students might focus more on the technology rather than the content. We need to strike a balance and ensure that technology aligns with our learning objectives.

In the same line, Gita expressed that using ICT distracted and disturbed the students from their learning. She added that managing and setting ICT in language teaching classes in her locality would consume much time. Furthermore, the use of ICT in a large class would not be effective since the students from the last bench could not hear/see while the students from the first bench would feel disturbed due to the heavy light and sound. However, she agreed on the appropriate use of ICT in an appropriate rather than the frequent overuse of ICT in English language teaching. She shared:

My perception of ICT's motivational impact varies based on the students.

Some succeed with technology and are highly motivated by interactive tools.

Others prefer traditional methods. So, I adapt by offering a mix of both.

Flexibility is key to addressing individual learning needs.

However, another participant, Rita, argued that ICT itself depends on the users who can use it appropriately and inappropriately. She shared her feelings that we could block the use of ICT from our day-to-day life, social life, and commercial life. Therefore, according to her, it could be better to accept it and use it in the language teaching classroom so that students could be motivated and encouraged for better learning by and through ICT. She expressed:

I've found that ICT works best for motivation when it's used strategically. It's not just about adding technical school for the sake of it; it should support the learning goals. For instance, I use game-based language learning apps that reward progress. It's like a challenge for them, and they're motivated to earn rewards and achievements while mastering English skills.

In the same vein, Shambu explained that the use of ICT in English language classes would be beneficial for teachers and students since it, as a new technology, motivates them. For him, using new technology, new practices, and new modes of presentations would motivate the students. However, he felt uncomfortable using ICT in his language classroom due to the improper balance among the ICT materials and class size, availability of electricity and internet, his scheduled time for teaching and availability of ICT, and so on. He shared one incident in which once he utilized his mobile phone to teach pronunciation, his students laughed since it was not audible for the last benchers. Full-fledged ICT was not available in his school. Ramesh did not have a different experience he would give his attention to the colorful illustrations and personal use of ICT at his university. To him, it would be the same for his students, too. He focused on traditional language teaching methods and practices from which the teachers could make their students pass the examination. According to him, using ICT in the class was time-consuming, tiring, and irritating for the teachers to manage everything. He thought that he was fine with what he had. However, occasionally using ICT in English language classes would be useful and motivating for the students.

Contrary to Ramesh, Harish argued that the use of ICT not only motivates the students it also provides an attractive platform for learning English beyond the class. He shared:

I see ICT as a gateway to exploring topics in-depth. Using additional online resources and virtual tours of English-speaking countries creates curiosity and motivates them to learn beyond the classroom.

Umesha and Rita argued that modern interactive language learning apps, games, and online quizzes motivate learners and provide authentic language and texts. Rita further admitted that most of her students attended virtual classes such as YouTube or others and got better learning. Along the same lines, Umesh argued that students are more motivated by social media. If the teachers use this platform to learn, they will learn faster, better, and more effectively. According to him, the students could learn from social media in two ways: engaging in a meaningful conversation, and reading/writing the texts/comments in social media. The use of social media is motivating and entertaining for their learning.

Harish again argued that the students enjoy creating vlogs/blogs, sharing their stories through ICT/social media, consulting online resources, making virtual tours, playing online language games, networking with native speakers/learners' groups, and making their learning fun.

Here, most of the participants were seen as positive towards using ICT in English language classes and language learning processes. However, some participants, such as Ramesh and Gita, argued for an appropriate use of ICT in English language classes.

ICT as a Tool for Pedagogical Activities

Regarding ICT as a tool for pedagogical activities, it summarizes the varied dimensions of employing ICT in pedagogical activities. It includes the effective learning process, replacing traditional teaching roles, proving more effective than printed materials, enabling easy learning activity integration, meeting resource needs,

attractive teaching accessibility, confidence, and enjoyment, effectively developing language skills and aspects, improving lesson presentation, inspiring education quality and student achievement, and providing updated document storage. The majority of the participants agreed that the use of ICT supports the teaching-learning activities. ICT, according to them, language teachers could make their classes resourceful, bring variety, and create a learning atmosphere. Harish, for example, described that ICT, such as PowerPoint presentations, makes their class more effective. He articulated:

Teachers can use multimedia presentations using tools like Microsoft PowerPoint and slides from online sources. These presentations can include visuals, audio, and interactive elements to make the content more compelling and facilitate better understanding.

Similarly, Umesh explained that ICT can make the English language class live and authentic. According to him, when the teacher wishes to present authentic texts, they could present their documents online, such as via YouTube or online videos of native speakers. Similarly, Rita argued that COVID-19 was a disturbance for many people worldwide but was a benefit for pedagogical practice via online/ICT. To her, many professionals, language teachers, and students have learned ICT as their profession. She described:

During COVID-19, our rural municipality notified us to conduct the class online. We started to learn ICT for our professional purposes and then taught English language courses and ICT to our students. Teachers and students learned ICT as a teaching-learning tool nearly together. However, it has changed the mode of teaching-learning. Even today, I try to utilize ICT or find resources for teaching learning.

She added that COVID-19 changed the paradigm of teaching-learning from a traditional way of teaching to a hybrid (physical and online) way of teaching. Most of the teachers have learned the use and value of ICT during COVID-19. I also personally realized this fact and encouraged my Ph.D. dissertation on it. Similarly, Umesh described that the ICT provides an e-library for unlimited resources, learning platforms for various levels and nature, teaching-learning materials, and so on. Regarding the English language, according to him, ICT has provided many apps to correct spelling, grammar, sentence formation, and texts. He remembered his baby son, who usually takes his mobile for nursery rhymes and games. I also shared my questionnaires with more than 200 teachers of Achham, Bajhang, and Kailali via email. In this sense, ICT is a good resource for teaching-learning purposes in or outside the classroom.

However, Shambhu expressed his doubt that ICT can be utilized in language teaching-learning classes where there are lots of constraints, such as ICT tools available to the teachers as well as the students, accessible internet, electricity/power, and the ICT experts who could be available when problems occur during the use of ICT in the class. However, he was positive towards the use of ICT in language class. He specified that the ICT facilitates the creation of interactive and engaging teaching and learning resources for effective language teaching classes. Describing the students' interest in social media, he further described:

Students can engage in language-centered projects on social media platforms, such as creating English-language posts, sharing language-related activities, or communicating in English.

Ramesh and Gita also agreed that ICT can help the teachers collect the materials, i.e., documents or slides, etc., and use them in their language classrooms as PowerPoint presentations.

The above discourse highlights how ICT can be integrated into English language teaching to create dynamic and effective teaching and learning resources, encouraging participation, collaboration, and improved language acquisition at the secondary level. In this context, most of the participants expressed their positive perceptions towards using ICT in their pedagogical practices. Some participants accepted that they could be utilized as other materials they have been using.

ICT as a Tool for Self-Learning

Within the context of investigating the areas of self-initiated learning in the English language teachers of Achham, Bajhang, and Kailali, this qualitative study involved six English language teachers. The teachers expressed their perceptions on using ICT for personal learning, such as making communication appropriate, using the internet for English language learning, using digital resources, clarifying the concept of the lesson, and using ICT for developing documents and notes. Regarding ICT as a tool for self-learning, the majority of the participants perceived it as an essential source for self-learning. For them, the use of ICT has reduced the role or load of the teachers for the students since they could autonomously learn the English language via online resources.

Harish also experienced the same that one could learn the English language via online sources more effectively. He also argued that there are many online resources in different forms and modes from which the students can learn the language as they wish at their speed. He further described:

Learners can use digital libraries and online reading platforms for effective learning. It has a vast of literature in varied forms at different sites. It also encourages independent reading, comprehension, and discussion of various texts. Furthermore, it helps the students improve their listening skills, expand their vocabulary, and gain real-world English language usage exposure.

Similarly, Umesh had the same version regarding using ICT as a self-learning tool. He expressed that ICT has information on each and everything. To him, one can consult ICT for their learning. In this case, he introduced:

Students can use various sorts of online sources and applications for their learning. They can utilize online texts, videos available on YouTube, games, quizzes in apps, and many more. The students can meet native speakers, talk to them, and learn from them through the online platforms.

Agreeing with Harish and Umesh, Rita argued that the students can learn English well using online sources. According to her, they can learn many more things, such as daily news, people's views, learning content, and so on. She said:

The students can use online spelling checkers, grammar checkers, writing tools, e-dictionary, pronunciation guides, and language games to improve listening, speaking, reading, and writing skills.

However, Gita refused the proper use of ICT for learning. She believed that most of her colleagues and students copied from online sources rather than learning. She described that the misuse of ICT has been weakening the quality of learning. She agreed that it would be carefully used when needed. In the same line, Ramesh argued that ICT cannot replace textbooks and teachers; they just support them. Therefore, according to him, the students primarily use the textbooks and learn from the teachers,

then only use the ICT for their further learning as needed or guided by the textbooks and the teachers.

However, all participants agreed that social media are widely accepted and used in and outside the school premises. Most agreed that social media could be effectively used for language learning purposes. However, some participants, such as Gita, argued that most students misuse (rather than use) social media and get disturbed by them. Nevertheless, Rita felt that the students learned something by reading and writing in English in their communication through social media. She further realized the need for language learners' forums in social media as she had learned many more things during COVID-19. She also gave examples of YouTube channels that can usually be used for learning purposes.

In this way, most of the participants agreed that they can utilize the ICT for self-learning purposes by offering autonomous language learning, enabling learners to access a wealth of resources, interact with language communities, and engage in targeted practice, all of which contribute to a well-rounded and self-directed language learning experience. However, some of the participants worried about the unnecessary use or misuse of ICT that would disturb their learning.

ICT as a Tool for Professional Development

Utilizing ICT in the English language classroom can motivate and enhance professional development pathways. This study explored the concrete classroom dynamics in Achham, Bajhang, and Kailali, where 222 English language teachers shared their insights. These teachers expressed how ICT usage is interlinked with their journey of improving professional prowess: using technology to refine teaching methodologies and practices holistically, actively participating in online courses and workshops to increase field-specific knowledge and expertise, observing how the

integration of technology positively influences student engagement and learning outcomes, capitalizing on digital tools to provide personalized and efficient student support, arranging blended learning strategies improved by ICT to provide to a various presentation of learning styles, acknowledging the essential role of digital literacy skills in using technology effectively for teaching, valuing the enriching experiences offered by virtual classrooms and ICT-facilitated online workshops, embracing novel pedagogical approaches prompted by computer-assisted instruction, foreseeing the transformative influence of emerging technologies in the future landscape of professional development within their domain, and endorsing the enduring belief that ICT stands as a pivotal instrument in fostering continuous growth and development within their professional domain.

The majority of the participants realized the need for ICT for a person's personal, social, and pedagogical benefits. In this regard, Harish, for example, described:

ICT has significantly transformed my professional development. Through online courses, webinars, and educational platforms, an additional resource is easily accessible. This enables me to stay current on the latest teaching methods and language trends and connect with educators worldwide. It serves as an invaluable tool for ongoing learning.

He further expressed that using ICT has broken down the walls of time and geography. For him, one obtains resources and information simultaneously, regardless of geography and other aspects. He gave one example: if one book is published in the USA, it can be delivered all over the world and at the same time online. Moreover, he viewed that one can capture all the information and data of the whole in his cell phone. In this context, one can develop himself/herself personally, socially, and

professionally through the information or virtual classes available in the e-world. In this context, Umesh also expressed:

ICT helps access a huge range of teaching materials. I can find lesson plans, teaching guides, and multimedia resources that save time and make my lessons more effective. It's not just about skill development; it's also about improving my teaching materials.

Supporting Umesh's view, Rita also described the various forms and nature of online learning materials for personal, social, and professional development. She stated:

One aspect of ICT that I love is the ability to collaborate with fellow teachers. Online forums, social media groups, and virtual conferences allow me to exchange ideas, share experiences, and learn from others. It's like having a global network of teachers who support and inspire each other.

In this context, most participants believed that the world has been limited within the ICT. According to them, one can find anything on the smartphone's screen. In this context, Shambu is also perceived as an all-around *Guru* of modern times. He justified:

Professional development through ICT helps me adapt to the changing educational landscape. I can explore emerging technologies, learn about innovative teaching strategies, and discover new ways to engage students. It's essential to progress with the times, and ICT facilitates that development.

However, Ramesh was found somehow particular in his description of ICT in English language class. He accepted ICT as a world of everything, from where one can take what one needs. He worried about the "negative contents in ICT". According

to him, one must know what he has needed before using ICT. In this context, he described:

While a wealth of information is available online, I'm careful about the quality and relevance of the content. Not everything suits my teaching style or aligns with my goals. I wish to be selective, choosing resources that truly enhance my skills and contribute to my growth as a teacher.

Gita also had a similar understanding but found herself poor in utilizing ICT for her personal and professional life. She also heard that most teachers utilized the ICT not for their professional development but for their benefit, i.e., copying the slides from ICT and using them in their class as if they were their own. According to her, her children sometimes supported her to find the materials for her teaching. She realized:

While ICT has many benefits, it's important to recognize potential barriers. Not all teachers have equal access to technology or the digital skills to explore online resources effectively.

However, Harish appreciated the role of ICT in English language classrooms to promote and refine his professional career and described:

ICT enables me to reflect on my teaching practices. Sometimes, I record my class and review myself to improve my teaching. I also tally my class against the classes available on online resources such as YouTube.

Rita also realized the need for ICT for effective teaching for a professional teacher. She expressed:

ICT encourages me to study with new teaching approaches. I can explore innovative methods from online sources. I occasionally use my mobile to teach

pronunciation and play language games or quizzes to teach spelling, grammar, etc. It makes my teaching fresh and exciting.

Similarly, Umesh experienced ICT as the best source for his professional development since he could not spend his money and time going out of his district for professional development. He said he could participate in inter/national webinars, and discussion forums, and consult online journals related to this teaching and profession. He explained:

ICT is a game-changer for busy teachers like me. I can attend professional development webinars during my free time. It allows me to balance my teaching responsibilities with personal growth, enhancing my skills without compromising my classroom duties.

However, Ramesh and Gita worried about the misuse of ICT. According to them, most teachers consult and teach online resources in their classes. To them, they used ICT for ICT's sake, not for the students and classes. Gita clarified:

Some of our colleagues are ICT-friendly. They do not study their books and reference materials but consult online resources, i.e., notes and slides for their classroom teaching. Moreover, they take online training but I have never seen their implementation in the classroom.

These views highlight the perceptions of English language teachers towards ICT as a tool for professional development. Most participants perceive ICT as a support for continuous learning and global connections. However, few participants experience the digital divide that creates possible barriers and inequalities, emphasizing the importance of equity in accessing and utilizing ICT for professional growth.

Summary of the Qualitative Results on the Perception of Using ICT

This qualitative study investigated the perceptions of six secondary-level English language teachers from districts such as Achham, Bajhang, and Kailali, examining their perceptions of ICT's various roles in English language teaching. The study focused on several dimensions of ICT's impression: its role in motivation, pedagogical practices, professional development, and self-learning. The participants' viewpoints collectively revealed various insights on each dimension.

The study aimed to understand how ICT enhances motivation in English language teaching by investigating perceptions from the selected teachers. The most of participants believed that incorporating ICT into teaching could make classroom activities more engaging, encourage positive student attitudes, and increase overall motivation. These teachers observed that multimedia elements, interactive quizzes, online discussions, and engaging digital resources improved student involvement and excitement, creating the learning experience dynamic and relevant learning experience.

Participants recognized the capacity of ICT to reform pedagogical practices. They saw ICT as a gateway to refine teaching methodologies, access online courses, and engage in workshops that support the subject knowledge. By implementing technology, these teachers aimed to improve student engagement and learning outcomes, employing digital tools to personalize support, adopting blended learning strategies enriched by ICT, and effectively incorporating technology in their teaching practices.

The integration of ICT in the English language classroom was seen as a catalyst for teachers' professional growth. Many participants described how online courses, webinars, and digital platforms provided them with resources, enabling

continuous learning and global connections. The accessibility of educational resources through ICT went beyond geographical barriers and facilitated staying updated on teaching methods and language development. However, some participants were careful about the quality and relevance of online content, emphasizing the significance of selectively using resources.

Participants recognized that ICT can facilitate self-initiated learning, make communication appropriate, access online resources, and clarify lesson concepts. Most believed that ICT enabled students to freely learn English through various online sources, including digital libraries, online reading platforms, language learning apps, and authentic language texts. While most participants viewed ICT as a valuable tool for self-directed learning, some expressed doubts regarding the possibility of misuse and distraction. The study revealed that English language teachers perceived ICT as a valuable tool for enhancing motivation, improving pedagogical practices, supporting professional development, and promoting self-learning. These teachers recognized the potential of ICT to create engaging classroom activities, connect with global educational networks, and encourage independent learning. However, while the majority of participants embraced the positive impact of ICT, a few expressed doubts about possible misuse and emphasized the importance of selective resource usage.

Merged and Compared the Results of Quantitative and Qualitative Data: Joint Display of Teachers' Level of Perceptions

The joint display of teachers' level of knowledge integrates both quantitative and qualitative results, as presented separately at first and then combined later which is illustrated in the following table:

Table 26*Joint Display of Teachers' Level of Perceptions*

Sub-dimensions	Quantitative result	Qualitative result	Combined result (QUAN+QUAL)
ICT as a tool for motivation	Making learning activities interesting and enjoyable (mean 4.29) Significant differences in district, qualification, and availability of digital resources in school,	Most of the participants were seen as positive towards using ICT in English language classes and language learning processes. However, some participants, such as Ramesh and Gita, argued for an appropriate use of ICT in English language classes.	Teachers generally perceive ICT as highly effective in making learning activities engaging and enjoyable. However, significant differences in ICT use are based on district, qualifications, and resource availability. While most view ICT positively, some express the importance of appropriate use to maximize benefits and minimize potential distractions.
ICT as a tool for pedagogical practices	ICT improves the presentation of material for the lesson (mean =3.97). Significant differences in district, qualification,	Most of the participants had positive responses towards using ICT in language learning processes. However, some participants, such as Ramesh and Gita, argued for an appropriate use of ICT in English language classes.	The results indicate a medium level of use of ICT tools in English language teaching classrooms, with significant differences based on district, resource availability, and teacher training. The qualitative data emphasizes the importance of these tools in improving student engagement and learning outcomes, highlighting diverse approaches and perceptions among teachers.
ICT as a tool for self-learning	ICT helps to develop documents, notes, etc. (mean=4.18). Significant differences in district, qualification, experience, availability of digital resource in school and training	Most of the participants agreed that they can utilize the ICT for self-learning purposes by offering autonomous language learning, enabling learners to access a wealth of resources, interact with language communities, and	Teachers show medium proficiency in using digital tools like social networks and blogs, with significant variability based on district, resources, and training. Qualitative data underscores the positive impact of digital tools on teaching and student engagement. Participants agreed that ICT supports self-learning by providing access

	status.	engage in targeted practice, all of which contribute to a well-rounded and self-directed language learning experience. However, some of the participants worried about the unnecessary use or misuse of ICT that would disturb their learning	to resources and language communities, but some emphasized the need for appropriate and controlled use to avoid distractions.
ICT as a tool for professional development	It increases knowledge of different sectors (mean 4.27). Significant differences in district, and availability of digital resources in school.	Most of the participants expressed their positive perceptions towards using ICT in their pedagogical practices. Some participants accepted that they could be utilized as other materials they have been using.	Most participants view ICT positively for enhancing class presentations, self-learning, and professional development, recognizing its role in developing documents, notes, and accessing resources. Significant differences in ICT use are based on district, qualification, experience, and available digital resources in schools. Despite the positive outlook, some participants stressed the need for appropriate and controlled use to prevent distractions.

Merged and compared the results: both the quantitative and qualitative data strongly indicate that ICT is seen as a highly effective tool for enhancing student motivation and engagement. Quantitative data revealed that teachers believed ICT could create enjoyable and engaging activities, foster positive student attitudes, and enhance overall motivation. This sentiment was echoed in the qualitative data, where participants observed that ICT made classroom activities more engaging and increased overall motivation. Specific tools like multimedia elements, interactive quizzes, and online discussions were highlighted as particularly effective.

The alignment between quantitative and qualitative results highlights a consistent recognition of ICT's potential to boost student motivation. However, the

qualitative data adds depth by pointing out practical challenges, such as the lack of an ICT-friendly environment, which can hinder the effective use of these tools. This suggests that while teachers universally recognize the motivational benefits of ICT, actual implementation can be constrained by external factors.

Likewise, teachers in both studies perceived ICT as beneficial for pedagogical practices and professional development. Quantitative data showed that ICT was seen as making the learning process more effective, replacing traditional methods, enabling personalized learning resources, and improving material presentation. There was also a strong interest in using ICT for professional development, including improving teaching skills, engaging with online courses, and impacting student engagement. Qualitative data supported these findings, with participants recognizing ICT's capacity to refine teaching methodologies, access online courses, and engage in workshops. They also saw ICT as a catalyst for professional growth, enabling continuous learning and global connections through digital platforms.

Both data sets underscore the significant role of ICT in enhancing pedagogical practices and supporting professional development. The consistency in findings shows that teachers appreciate ICT's ability to personalize learning, improve material presentation, and facilitate professional growth. However, qualitative data highlights concerns about the quality and relevance of online content, emphasizing the need for selective use of resources. This comparison underscores the necessity of not only providing access to ICT tools but also ensuring their quality and relevance to maximize their effectiveness in teaching and professional development.

Moreover, quantitative data indicated that teachers' familiarity with hardware, digital concepts, educational apps, and software was moderate, influenced by factors such as district, qualification, experience, employment status, and availability of

digital resources. Qualitative data revealed practical challenges faced by teachers, such as the lack of an ICT-friendly environment, which hindered effective implementation despite recognizing the potential benefits. Both data sets highlight the gap between theoretical knowledge and practical application. Quantitative results show that various demographic and resource-related factors influence teachers' ICT knowledge and usage. Qualitative findings provide context to these numbers, illustrating real-world challenges such as inadequate infrastructure and support. This comparison emphasizes the need for targeted strategies to bridge the gap between knowledge and practice, ensuring that teachers can effectively utilize ICT tools in their classrooms.

In conclusion, the merged and compared results from quantitative and qualitative data provide a comprehensive understanding of secondary-level English language teachers' perceptions and experiences with ICT. Both data sets consistently highlight the positive impact of ICT on motivation, engagement, pedagogical practices, and professional development. However, practical challenges and concerns about content quality and relevance underscore the need for ongoing support, targeted strategies, and careful selection of resources. Addressing these issues can enhance the effective integration of ICT in teaching, ultimately benefiting both teachers and students.

Interpretation of Perception of ICT by English Language Teachers

The results from both quantitative and qualitative analyses provide a well-rounded understanding of secondary-level English language teachers' perceptions of ICT in their teaching practices.

Quantitative findings indicate that teachers perceive ICT as a highly effective tool for motivation. They believe ICT can make classroom activities more engaging and foster

positive attitudes among students. Qualitative data supports this view, with teachers observing that ICT tools such as multimedia and interactive quizzes enhance student involvement and excitement. However, both data sources reveal that practical barriers, like inadequate ICT infrastructure, can limit the effectiveness of these tools. Likewise, according to the quantitative analysis, teachers see ICT as valuable for improving pedagogical practices, including personalizing learning and enhancing lesson presentations. The qualitative insights align with this, as teachers report using ICT to refine teaching methods, access professional development resources, and implement blended learning strategies. Nonetheless, there are concerns about the quality of online resources, suggesting that while ICT offers significant advantages, careful selection and effective use of digital tools are necessary for maximizing their impact.

Moreover, the quantitative data shows that teachers have a strong preference for using ICT for self-learning and accessing a variety of teaching resources. This is echoed in the qualitative data, where teachers highlight the benefits of ICT for independent learning and resource diversification. Some concerns about potential distractions and misuse are noted, underscoring the need for strategies to manage ICT use effectively and ensure it serves its intended educational purposes.

In the same line, the quantitative data reveals that demographic factors such as district and qualification can influence teachers' perceptions of ICT, particularly in terms of motivation and professional development. Although the qualitative study does not explicitly address these demographic differences, it provides a general perspective on how ICT is perceived across different regions. This combined view suggests that while demographic factors may affect specific aspects of ICT integration, the overall positive perception of ICT is widespread among teachers.

In summary, both quantitative and qualitative data indicate that secondary-level English language teachers generally have a favorable view of ICT. They recognize its potential to enhance motivation, improve pedagogical practices, support professional development, and facilitate self-learning. Addressing implementation challenges and carefully managing ICT resources are essential for fully realizing these benefits.

Chapter Summary

In this chapter, the study explored teachers' views on ICT in several dimensions: its role as a motivational tool, its application in pedagogical practices, its impact on professional development, and its potential for facilitating self-learning. By examining these areas, the chapter aimed to provide a comprehensive understanding of how teachers perceive the integration of ICT in their educational practices and its broader implications for teaching and learning.

The findings revealed that secondary-level English language teachers generally view ICT as a valuable asset in motivating students and enhancing their engagement in learning activities. Teachers also recognized the benefits of ICT in supporting innovative pedagogical practices, allowing for more interactive and student-centered learning environments. Additionally, the chapter highlighted the role of ICT in teachers' professional development, providing opportunities for continuous learning and skill enhancement. Finally, the perception of ICT as a tool for self-learning was noted, emphasizing its potential to foster autonomous learning among both teachers and students. These insights are crucial for developing effective strategies to integrate ICT into the education system, ensuring that teachers are well-equipped to leverage its full potential.

Chapter Six

Practices of ICT in English Language Classrooms

In this chapter, I have attempted to address the research questions (RQ 4) on the practices of ICT secondary-level English language teachers in the English language classroom. For this, secondary-level English language teachers' practices on ICT were observed in terms of the use of digital devices in the ELT classroom, the use of digital tools and materials in the ELT classroom, use of ICT in pedagogical practices.

Results of Quantitative Data

In this section, secondary-level English language teachers' practices of ICT in the classrooms were analyzed regarding ICT as the use of digital devices, tools, and materials and in pedagogical practices in the ELT classrooms.

Use of Digital Devices in the ELT Classrooms

Teachers' practices regarding the use of digital devices in ELT classrooms refer to the use of a Computer /Laptop in the classroom, the use of an interactive whiteboard or smart board while teaching in the classroom, the use of Slides/ PowerPoint through multimedia projector, using Web/blog, use E-mail through ICT in online while teaching in the classroom, CD/DVD, democratizing film in the classroom, internet quiz/ task/ online games, use Smartphone/ mobile in the classroom, use computer Lab when necessary in the teaching. The results of this section can be presented in Table 27.

Table 27*Use of Digital Devices in the ELT Classroom (n=222)*

Statements	Intensity					Mean	SD	Level
	N	R	S	O	VO			
Computer \Laptop	5	59	105	39	14	2.99	0.89	Medium
Language Laboratory /learning platform	38.3	23.0	19.4	14.4	5.0	2.25	1.24	Low
Slides/ PowerPoint	13.1	21.2	42.8	17.6	5.4	2.81	1.05	Medium
Computer Lab, when necessary, in teaching	14.4	22.5	41.0	17.6	4.5	2.75	1.05	Medium
Multimedia/projector	13.1	23.0	47.3	11.7	5.0	2.73	1.00	Medium
Use of digital boards	5.4	20.7	56.8	13.1	4.1	2.90	0.84	Medium
Tutorials/videos	23.0	19.4	41.4	12.2	4.1	2.55	1.09	Medium
Internet Quiz/ Task/ Online Games	18.9	25.7	31.1	20.7	3.6	2.64	1.12	Medium
Use of Smartphone/mobile	9.9	17.6	51.8	14.9	5.9	2.89	0.97	Medium
Web/blog	23.0	27.0	30.2	14.9	5.0	2.52	1.14	Medium
Total						2.70	0.81	Medium

The overall results of Table 27 show that the status of using digital devices in the ELT classroom is medium (Mean=2.70, SD=0.81) level. Based on the item-wise result, the status of using digital devices in the ELT classroom was found to be comparatively high in the computer/laptop (Mean=2.99, SD=0.89) and low in the language laboratory /learning platform (Mean=2.25, SD=1.24). Furthermore, the level of items was found as medium level in slides/ PowerPoint (Mean=2.81, SD=1.05), computer lab when necessary in teaching (Mean=2.75, SD=1.05),

multimedia/projector (Mean=2.73, SD=1.00), using of digital boards (Mean=2.90, SD=0.84), tutorials/videos (Mean=2.55, SD=1.09), internet quiz/ task/ online games (Mean=2.64, SD=1.12), using of smartphone/mobile (Mean=2.89, SD=0.97), and web/blog (Mean=2.52, SD=1.14).

Use of Digital Devices in the ELT Classroom From Demographic

Perspective. Teachers' perception of the use of digital devices was analyzed from different demographic perspectives such as districts, qualifications, experiences, employment status, having digital devices, availability of digital resources in the schools, and training status. The results of this section are detailed and presented in Table 28.

Table 28

Use of Digital Devices in the ELT Classroom From a Demographic Perspective (n=222)

Variables	Frequency	Mean	SD	P-value
Districts				
Achham	71	2.63	0.71	0.00*
Bajhang	67	2.26	0.56	
Kailali	84	3.12	0.86	
Qualification				
Bachelor	47	2.55	0.68	0.14
Master/MPhil	175	2.74	0.84	
Experience				
Less than 5 years	34	2.55	0.71	0.48
5 - 10 years	97	2.74	0.82	
11 - 15 years	44	2.63	0.69	
More than 15 years	47	2.80	0.96	
Employment Status				
Permanent	73	2.75	0.74	0.51
Temporary	149	2.68	0.85	

Having digital devices

No	82	2.59	0.88	0.13
Yes	140	2.77	0.77	

Availability of digital resources in school

Poor	40	2.48	0.75	0.00*
Moderate	81	2.43	0.67	
Good	93	2.95	0.83	
Very good	8	3.71	0.50	

Training status

No	129	2.45	0.67	0.00*
Yes	93	3.05	0.87	

Table 28 shows that the use of digital devices in the ELT classroom in the Kailali district (Mean= 3.12, SD= 0.86) was found to be higher than Achham (Mean= 2.63, SD= 0.71) and Bajhang (Mean= 2.26, SD= 0.56) district. The p-value was found less than 0.05 (p=0.00). Hence, there is a significant difference among districts in the use of digital devices in the ELT classroom.

Based on the qualification of teachers, the use of digital devices in the ELT classroom by the teachers with master/MPhil (Mean= 2.74, SD= 0.84) qualification was found to be higher than the teachers with bachelor level (Mean= 2.55, SD= 0.68) qualification. The p-value was found more than 0.05 (p=0.14). Hence, there is no significant difference in the use of digital devices in the ELT classroom among them.

Based on the experience of respondents who had more than 15 years of experience (Mean= 2.80, SD= 0.96) were found to be higher than experience with 5-10 years (Mean= 2.74, SD= 0.82), 11-15 years (Mean= 2.63, SD= 0.69) and less than 5 years (Mean= 2.55, SD= 0.71). However, the p-value was more than 0.05 (p= 0.48), indicating no significant difference among them.

Based on employment status, permanent teachers (Mean= 2.75, SD= 0.74) were found to be higher than temporary teachers (Mean= 2.68, SD= 0.85). However, the p-value was found to be more than 0.05 ($p= 0.51$). Hence, there is no significant difference between them.

The teachers who had digital devices (Mean= 2.77, SD=0.77) were found to be higher than other teachers who did not have digital devices (Mean= 2.59, SD= 0.88), and the p-value was found to be more than 0.05 ($p=0.13$). So, there is no significant difference between them.

ICT very good facilitated school (Mean= 3.71, SD= 0.50) was found to have higher proficiency than other schools in those schools than good (Mean= 2.95, SD= 0.83), poor (Mean= 2.48, SD= 0.75) and moderate (Mean= 2.43, SD= 0.67) condition. The p-value was found to be less than 0.05 ($p=0.00$). Hence, there is a significant difference in using digital devices in ELT classrooms. The result was favored in ICT very well-facilitated schools.

The result shows that ICT-trained teachers (Mean= 3.05, SD= 0.87) had higher proficiency levels in digital devices in the ELT classroom than untrained teachers (Mean= 2.45, SD= 0.67). The P-value was found to be less than 0.05 ($p=0.00$). Hence, there is a significant difference in using digital devices in the ELT classroom.

Use of Digital Tools and Materials in the ELT Classrooms

Teachers' practices in using digital tools and materials in ELT classrooms include producing texts with word processing programs, using email for communication, capturing and editing digital photos, videos, or graphics, developing online test items, organizing computer files into folders and subfolders, sending files via email to students or colleagues, creating presentations with simple animations and

incorporating video or audio clips, creating and maintaining blogs or websites, and participating in social networks. The result of this section is shown in Table 29.

Table 29

Use of Digital Tools and Materials in the ELT Classroom (n=222)

Statements	Intensity					Mean	SD	Level
	N	R	S	O	VO			
Produce a text using a word processing program.	14.9	24.8	43.2	12.6	4.5	2.67	1.02	Medium
Use emails to communicate with others.	12.6	24.3	43.7	14.9	4.5	2.74	1.01	Medium
Capture and edit digital photos movies or other graphics.	16.2	32.4	36.9	11.7	2.7	2.52	0.99	Medium
Developed test items online.	20.3	33.3	29.3	14.9	2.3	2.45	1.04	Medium
Organize computer files in folders and subfolders.	9.0	22.1	45.5	15.3	8.1	2.91	1.03	Medium
Send a file through email to students or teachers.	18.5	31.5	34.2	13.1	2.7	2.50	1.02	Medium
Create a presentation with simple animation functions.	11.3	30.2	41.4	14.4	2.7	2.67	0.95	Medium
Create a presentation with video or audio clips.	8.1	25.7	46.8	17.1	2.3	2.80	0.90	Medium
Create and maintain blogs or websites.	18.9	39.2	27.0	12.6	2.3	2.40	1.01	Medium
Participate in social networks.	6.3	24.8	44.1	17.6	7.2	2.95	0.98	Medium
Total						2.66	0.81	Medium

The overall results of Table 29 show that the level of using digital tools and materials in the ELT classroom (Mean=2.66, SD=0.81) was found to be medium. Based on the item-wise result, the status of using digital tools and materials in the ELT classroom was found to be comparatively high in participation in social networks (Mean=2.95, SD=0.98) and low in developing test items online (Mean=2.45, SD=1.04). Moreover, the level of all remaining items also was found to be medium as producing a text using a word processing program (Mean=2.67, SD=1.02), using emails to communicate with others (Mean=2.74, SD=1.01), capturing and editing digital photos and movies or other graphics (Mean=2.52, SD=0.99), organizing

computer files in folders and subfolders (Mean=2.91, SD=1.03), sending a file email within someone another student or teacher (Mean=2.50, SD=1.02), creating a presentation with simple animation functions (Mean=2.67, SD=0.95), creating a presentation with video or audio clips (Mean=2.80, SD=0.90), and creating and maintaining blogs or web sites (Mean=2.40, SD=1.01).

Use of Digital Tools and Materials in the ELT Classroom From a Demographic Perspective. Teachers' practices in using digital tools and materials in ELT classrooms were analyzed from different demographic perspectives such as districts, qualifications, experiences, employment status, having digital devices, availability of digital resources in the schools, and training status. The results of this section are detailed and presented in Table 30.

Table 30

Use of Digital Tools and Materials in the ELT Classroom From a Demographic Perspective (n=222)

Variables	Frequency	Mean	SD	P-value
Districts				
Achham	71	2.63	0.71	0.00*
Bajhang	67	2.23	0.57	
Kailali	84	3.04	0.87	
Qualification				
Bachelor	47	2.53	0.78	0.19
Master/MPhil	175	2.70	0.81	
Experience				
Less than 5 years	34	2.47	0.60	0.36
5 - 10 years	97	2.72	0.81	
11 - 15 years	44	2.74	0.74	
More than 15 years	47	2.60	0.97	
Employment Status				
Permanent	73	2.65	0.77	0.92

Temporary	149	2.67	0.83	
Having digital devices				
No	82	2.56	0.85	0.15
Yes	140	2.72	0.78	
Availability of digital resources in school				
Poor	40	2.59	0.84	0.04*
Moderate	81	2.49	0.72	
Good	93	2.82	0.82	
Very good	8	2.98	0.97	
Training status				
No	129	2.41	0.67	0.00*
Yes	93	3.01	0.85	

The table shows the use of digital tools and materials in the ELT classroom in the Kailali district (Mean= 3.04, SD= 0.87) was found to be higher than the use of digital tools and materials in the ELT classroom in Achham (Mean= 2.63, SD= 0.71) and Bajhang (Mean= 2.23, SD= 0.57) district. The p-value was found less than 0.05 (p=0.00). Hence, there is a significant difference among districts in using digital tools and materials in the ELT classroom.

Based on qualification, the use of digital tools and materials in the ELT classroom by the teachers with master/MPhil (Mean= 2.70, SD= 0.81) qualification was found to be higher than those teachers having bachelor level (Mean= 2.53, SD= 0.78) qualification. However, the p-value was more than 0.05 (p=0.19). So, the result is insignificant i.e., there is no significant difference among them.

Based on the experience of respondents, the use of digital tools and materials in the ELT classroom who have experience 11- 15 years (Mean= 2.74, SD= 0.74) was found to be higher than experience with 5 - 10 years (Mean= 2.72, SD= 0.81), more than 15 years (Mean= 2.60, SD= 0.97) and less than 5 years (Mean= 2.47, SD= 0.60).

The p-value was found to be more than 0.05 ($p= 0.36$), indicating no significant difference between them.

Concerning employment status, using digital tools and materials in the ELT classroom temporary teachers (Mean= 2.67, SD= 0.83) was found to be higher than permanent teachers (Mean= 2.65, SD= 0.77). However, the p-value was more than 0.05 ($p= 0.92$). Hence, there is no significant difference in using digital tools and materials in the ELT classroom.

The use of digital tools and materials in the ELT classroom with digital devices (Mean=2.72, SD=0.78) was found to be higher than respondents who did not have digital devices (Mean= 2.56, SD= 0.85). However, the p-value was more than 0.05 ($p=0.15$), Therefore, there is no significant difference between them. Based on the condition of digital resources at school, those having digital resources in very good condition (Mean= 2.98, SD= 0.97) were found more than digital resources with good (Mean= 2.82, SD= 0.82), poor (Mean= 2.59, SD= 0.84) and moderate (Mean= 2.49, SD= 0.72) condition. Moreover, the p-value was found less than 0.05 ($p=0.04$). Hence, there is a significant difference i.e., better results in the ICT-facilitated schools than in other schools.

Trained teachers in ICT were found to be at a higher level (Mean= 3.01, SD= 0.85) than the untrained teachers (Mean= 2.41, SD= 0.67). However, the p-value was less than 0.05 ($p=0.00$). Thus, the result is significant, i.e., there is a significant difference between them.

Use of ICT in Pedagogical Practices in the ELT Classrooms

Teachers' practices regarding the use of ICT in pedagogical practices in ELT classrooms regarding using grammar checker, pronunciation, and paraphrasing software, virtual classrooms with Zoom, Teams, Google Meet, Google Hangouts,

etc., participating in social networking such as Facebook, Viper, WhatsApp, using educational apps, suggesting students about internet surfing for English Language learning and ethical issues in using digital resources, and preparing materials to use with an interactive whiteboard. It is shown in Table 31.

Table 31

Status of Using ICT in Pedagogical Practices (n=222)

Statements	Intensity					Mean	SD	Level
	N	R	S	O	VO			
Using grammar checker, pronunciation, and paraphrasing software	19.8	32.0	31.1	14.0	3.2	2.49	1.06	Medium
Use of learning management system tools like Google Classroom	14.0	31.5	33.8	17.1	3.6	2.65	1.03	Medium
Use virtual classrooms with Zoom, Teams, Google Meet, Google Hangouts, etc.	9.5	24.8	43.7	15.8	6.3	2.85	1.01	Medium
Participate in social networking as Facebook, Viper, WhatsApp	17.1	33.8	31.5	13.1	4.5	2.54	1.06	Medium
Using educational apps	8.1	20.3	48.6	15.8	7.2	2.94	0.99	Medium
Suggest students about internet surfing for English Language learning	7.2	27.0	44.1	18.0	3.6	2.84	0.93	Medium
Suggest students about	8.6	28.8	40.1	18.5	4.1	2.81	0.97	Medium

ethical issues in using									
digital resources									
Prepare materials to use	36.9	7.7	32.0	18.0	5.4	2.47	1.30	Medium	
with an interactive									
whiteboard									
Total						2.70	0.88	Medium	

The overall results of Table 31 show that the level of using ICT in pedagogical practices (Mean=2.70, SD=0.88) was found to be a medium proficiency level. Based on the item-wise result, the status of using ICT in pedagogical practices was found to be comparatively high in using educational apps (mean=2.94, SD=0.99) and low in preparing materials to use with an interactive whiteboard (mean=2.47, SD=1.30). Moreover, the level of remaining items also medium as using grammar checker, pronunciation, and paraphrasing software (Mean=2.49, SD=1.06), using learning management system tools like Google Classroom (Mean=2.65, SD=1.03), virtual classroom with Zoom, Teams, Google Meet, Google Hangouts, etc. (Mean=2.85, SD=1.01), participating in social networking as Facebook, Viper, and WhatsApp (Mean=2.54, SD=1.06), suggesting students about internet surfing for English language learning (Mean=2.84, SD=0.93), and ethical issues in using digital resources (Mean=2.81, SD=0.97).

Use of ICT in Pedagogical Practices From a Demographic Perspective.

Teachers' practices using ICT pedagogical practices were analyzed from different demographic perspectives such as districts, qualifications, experiences, employment status, having digital devices, availability of digital resources in the schools, and training status. The results of this section are detailed and presented in Table 32.

Table 32*Use of ICT in Pedagogical Practice From a Demographic Perspective (n=222)*

Variables	Frequency	Mean	SD	P-value
Districts				
Achham	71	2.66	0.76	0.00*
Bajhang	67	2.08	0.59	
Kailali	84	3.22	0.83	
Qualification				
Bachelor	47	2.61	0.86	0.47
Master/MPhil	175	2.72	0.88	
Experience				
Less than 5 years	34	2.44	0.67	0.24
5 - 10 years	97	2.76	0.89	
11 - 15 years	44	2.81	0.80	
More than 15 years	47	2.65	1.02	
Employment Status				
Permanent	73	2.70	0.81	0.94
Temporary	149	2.69	0.91	
Having digital devices				
No	82	2.58	0.91	0.13
Yes	140	2.77	0.85	
Availability of digital resources in school				
Poor	40	2.56	0.92	0.00*
Moderate	81	2.43	0.77	
Good	93	2.92	0.88	
Very good	8	3.48	0.48	
Training status				
No	129	2.37	0.75	0.00*
Yes	93	3.15	0.84	

In Table 32, the use of ICT in pedagogical practices in the Kailali district

(Mean= 3.22, SD= 0. 0.83) was found to be higher than in the Achham district

(Mean= 2.66, SD= 0.76) and Bajhang district (Mean= 2.08, SD= 0.59). However, the p-value was found less than 0.05 ($p=0.00$). So, there is a significant difference among districts in the use of ICT in pedagogical practices in favor of the teachers of the Kailali district.

Based on qualification, the use of ICT in pedagogical practices by the teachers with Master/MPhil (Mean= 2.72, SD= 0.88) qualification was found to be higher level than the teachers with bachelor level (Mean= 2.61, SD= 0.86) qualification. Moreover, the p-value was found to be more than 0.05 ($p=0.47$). Hence, there is no significant difference in the use of ICT in pedagogical practices among the teachers within the qualification.

Based on the experience of respondents, the use of ICT in pedagogical practices who have 11-15 years of experience (Mean= 2.81, SD= 0.80) was found to be higher than experience with 5 - 10 years (Mean= 2.76, SD= 0.89), more than 15 years (Mean= 2.65, SD= 1.02) and less than 5 years (Mean= 2.44, SD= 0.67). The p-value was found to be more than 0.05 ($p= 0.24$). So, there is no significant difference in the use of ICT in pedagogical practices based on the respondents' experience.

Based on employment status, the use of ICT in pedagogical practices of permanent teachers (Mean= 2.70, SD= 0.81) was to be higher than temporary teachers (Mean= 2.69, SD= 0.91). Moreover, the p-value was found to be more than 0.05 ($p= 0.94$), which is why there is no significant difference in the use of ICT in pedagogical practices based on the employment status of the teachers.

The use of ICT in pedagogical practices in having digital devices (Mean=2.77, SD=0.85) was found to be higher than respondents not having digital devices (Mean= 2.58, SD= 0.91), and the p-value was found to be more than 0.05 ($p=0.13$). So, the result is insignificant, indicating that there is, indicating, no significant difference in

the use of ICT in pedagogical practices and the availability of digital devices with the teachers.

The use of ICT in pedagogical practices based on the condition of digital resources very good in school (Mean= 3.48, SD= 0.48) was found higher digital resources in good (Mean= 2.92, SD= 0.88), poor (Mean= 2.56, SD= 0.92) and moderate (Mean= 2.43, SD= 0.77) condition. However, the p-value was less than 0.05 ($p=0.00$). Hence, the result is significant, indicating a significant difference in the use of ICT in pedagogical practices based on the condition of digital resources at school.

The teachers with ICT-related training with ICT use in pedagogical practices (Mean= 3.15, SD= 0.84) were found to be higher than the respondents who had no training (Mean= 2.37, SD= 0.75). Additionally, the p-value was found to be less than 0.05 ($p=0.00$). Hence, there is a significant difference in the use of ICT in pedagogical practices among the teachers having and not having ICT-related training.

Summary of the Quantitative Results on the Practices of ICT in ELT

The status of using digital devices in the ELT classroom is medium in level. The result of most of the Items was computer/laptop, slides/PowerPoint, computer lab, when necessary, in teaching, multimedia/projector, digital boards, tutorials/videos, internet Quiz/ Task/ Online Game, Smartphone/mobile, Web/blog was medium. However, the result was low in the language laboratory/learning platform.

Status of using digital devices in different variables, such as the district, availability of the digital resources in the school, and training status in support to Kailali district, moderate level status of using digital resources in school and trained teachers respectively. However, the remaining variables have no role in determining the status of using digital devices.

The status of using digital tools and materials in the ELT classroom was medium level. The same result was found in all items such as participating in social networks, developing test items online, producing a text using a word processing program, using emails to communicate with others, capturing and editing digital photos, movies, or other graphics, organizing computer files in folders and subfolders, creating a presentation with simple animation functions, video or audio clips, creating and maintaining blogs or web sites. However, they are comparatively high in participating in social networks and low in developing test items online.

The status of using digital tools and materials in the ELT classroom in different variables, among them, the district, availability of the digital resources in the school, and training status in support of Kailali district, very good condition of digital resources in the school and trained teachers respectively. However, the remaining variables do not determine the use of digital tools and materials in the ELT classroom.

The status of using ICT in pedagogical practices in the classroom was medium level. A similar result was found in all items, such as using educational apps, preparing materials to use with an interactive whiteboard, grammar checker, pronunciation and paraphrasing software, learning management system tools like Google Classroom, virtual classroom with Zoom, Teams, Google Meet, Google Hangouts, etc., participating in social networking as Facebook, Viber, WhatsApp, suggesting students about internet surfing for English Language learning, and suggesting students about ethical issues in using digital resources. However, comparatively, the result was high in educational apps and low in preparing materials with an interactive whiteboard.

The status of using pedagogical practice in the ELT classroom in different variables, among them, the district, availability of the digital resources in the school,

and training status in support to Kailali district, very good condition of digital resources in school and trained teachers respectively. However, the remaining variables do not determine the use of digital tools and materials in the ELT classroom.

Results of Qualitative Data

In this section, qualitative data obtained from the English language teachers' class observations coupled with interviews were analyzed. Thus, I presented here one sample class vignette of each participant and analyzed them in terms of the status of using digital devices in the ELT classroom, the status of using digital tools and materials (educational software and apps) in the ELT classroom, and status of using ICT in pedagogical practices. Here are six vignettes of English language classes of six participants.

A Vignette of Gita's Class

Gita has been teaching in Malika Secondary School as an English teacher, she teaches class 9 and 10 compulsory English. In the observation, she taught class 10, lesson 9; 'History and Culture', teaching topic was 'Description of Gorkhas'.

Mrs. Gita, an English language teacher, entered the class at her rural secondary school in Nepal. The classroom walls are decorated with handmade charts and posters designed by the students. In this traditional setting, as the teacher entered the class, the students stood up and greeted her with "Good morning, miss". She repeated "morning" and gesturally told them to sit down. The students sat eagerly in rows, awaiting the day's lesson.

Mrs. Gita, the teacher, stood at the front with a marker pen in hand and a whiteboard as her work. She initiated the class by writing the day's topic, "History and culture," providing explanations of its significance. Employing a deeply traditional approach, she relied on verbal explanations, teacher-led discussions, and

references to the textbook. As the lesson progressed, she engaged her students in more grammar and sentence structure details. She carefully explained concepts, occasionally using textbook illustrations to clarify. Students listened to her attentively, writing notes in their notebooks. Notably, no projectors, laptops, or tablets were present; only the timeless interaction of teacher and students focused on knowledge conveyed through spoken words and handwritten notes. Chalk (i.e., marker pen) and talk were materials for her teaching.

During discussion segments, she divided the class into pairs for discussions, conducted in Nepali with occasional English translations. The classroom buzzed with conversations as students exchanged ideas and clarified uncertainties, indicating active participation. ICT was not used at any phase of her teaching, though she had a cellphone/ mobile in her hand, English language learning textbooks, handwritten notes, and face-to-face interactions. Her traditional approach focused on students' comprehension through oral explanations, textbook references, and classroom interactions.

After giving homework to the students, she came out of the class.

A Vignette of Ramesh's Class

Ramesh has been teaching in Ashodha Secondary School as an English teacher. He teaches class 9 and 10 compulsory English. In the observation, he taught class 10, lesson 8; 'Hobbies and interest'. The teaching topic was 'Talking about Hobbies'

In this traditional setting, Ramesh instructed and commanded attention at the front of the room. He initiated the class by writing and talking about the day's topic: Hobbies. His pedagogy was classical, relying on verbal explanations, teacher-led dialogues, and references to the textbook.

As the lesson extended, he read the lesson and asked the students to underline the difficult words. After that, he described the words in English and Nepali. Then, he read the text again paragraph by paragraph, explained them in Nepali, and asked questions frequently to confirm the students' understanding (rather than language learning). He used the textbook, marker pen, and whiteboard as his teaching materials. He had a mobile in his pocket and laptops in the office. He did not use any such ICT materials in his class.

After, completing the lesson/topic, he read the questions given below the text and answered orally. It was nearly time over. He asked the students to come to school with homework from pages 220-224.

A Vignette of Shambu's Class

Shambhu has been teaching in Janakalyan Secondary School as an English teacher. He teaches classes 9 and 10 compulsory English. In the observation, he taught class 10, lesson 10, 'Games and Sports', grammar secession teaching topic was 'Voice'.

The teacher, Mr. Shambhu, greeted his students with warmth and started his class as they settled into their seats. He set up his laptop and multimedia projector in the class. The students exchanged curious glances, buzzing with their friends as the presentation/scene was exciting. With a quiet sense of excitement, Mr. Shambu introduced the concept of the day: Voice via beautiful slides.

Mr. Shambu directed their attention to the PowerPoint presentation. He presented the structures and examples of "active voice" and "passive voice" in different columns. He further presented a list of sentences and asked the students to supply the structures and vice-versa via PowerPoint presentation. Then, he presented the rules for converting "active voice" into "passive voice" and vice versa with

examples via his PowerPoint presentation. He once presented a short video, “How to change active voice into passive voice” though the voice was not audible to the last benchers. Then, he presented some questions on the slide and asked the students to supply their answers in note copies. After a few minutes, he showed their answers on the next slide and asked them to check their answer. The students seemed to be active and energetic in the class. Due to the colorful and attractive design of the presentation, the students focused their eyes on the slides.

The class ended with a discussion about their experiences. They felt happy due to the interactive nature of learning via multimedia projectors. At last, Shambu asked the students to complete the exercises from the textbook and said “goodbye” to them.

A Vignette of Rita’s Class

Rita has been teaching at Mahendra Secondary School as an English teacher. She teaches classes 9 and 10 compulsory English. In the observation, she taught class 9, lesson 10; ‘The Earth and Space, teaching topic was ‘Locating Places’.

In the observed English language class, the teacher engaged himself in various activities with a predominantly teacher-centered approach. The class began with the teacher entering and directly starting the lesson without any warm-up activity. Greeting the students, she launched into the lesson, which led to complete silence from the students. While some students responded to the greeting, others remained silent and attempted to open their books. The lack of student engagement was evident as most students appeared sad and disinterested. Additionally, the teacher used a mobile phone twice during the class to search for the meanings of difficult words on Google, showing a rare use of ICT.

The teacher wrote the topic on the board during the presentation phase and began reciting a poem. She also wrote word meanings on the board and used her

mobile phone to find the meanings of challenging words. However, the students remained silent until permitted to speak and only the more talented students participated actively. There was a noticeable disconnect between the teacher's instruction and the student's level of participation. The teacher's use of ICT tools was limited to searching for word meanings on her mobile phone and writing on the board.

The teacher asked a few questions in the practice phase, but only the talented students responded consistently. The less talented students were not encouraged to participate, and this lack of motivation hindered their engagement in the learning process. The teacher-centric approach persisted throughout the evaluation phase, where the teacher asked questions without encouragement and an environment for comprehensive student participation.

The teacher assigned textbook exercises for homework, and the students responded with nodding heads and "Yes, madam." The class lacked creative assignments or activities that could have engaged students on a deeper level. Moreover, the teacher frequently used the mother tongue during instruction, which briefly encouraged more active responses from the students, explaining the importance of familiar language in communication.

Overall, the classroom observation highlighted a lack of student involvement and engagement during various activities. The limited use of ICT tools, such as the occasional mobile phone search, indicated that the class favored traditional teaching methods. While the teacher's effort to maintain student attention was evident, there remains a need to adopt more interactive teaching strategies, encourage student participation, and explore creative approaches to make learning a more lively and engaging experience for all learners.

A Vignette of Umesh's Class

Umesh has been teaching at Ganga Secondary School as an English teacher. He teaches classes 9 and 10 compulsory English. In the observation, he taught class 9, lesson 6; 'Custom and Culture', grammar secession teaching topic was 'Asking for Permission' page no.69.

In the warming phase, the teacher began the class with a warm greeting, establishing a positive classroom environment. Students responded by greeting the teacher in return. The teacher asked a student to lend his textbook and write the topic on the whiteboard. Students followed the teacher's instructions, cooperating in the process.

During the presentation phase, the teacher employed an innovative approach by showing a video clip containing a short conversation asking for permission. This engaged the students and set the tone for the topic. The teacher then displayed a list of components related to the conversation, encouraging a discussion about their uses in formal and informal contexts. Students actively watched the video and participated in the discussion, demonstrating their involvement in learning. The teacher's use of ICT materials, such as internet browsers and a laptop, contributed to effectively preparing and delivering the lesson. Then, he showed the e-course book, page 69. There were three exercises A for structure by giving sentences, B for pairs conversation giving the situation. He involved the students' discussion in pair conversation; one asked permission and another responded. A class should seem lively. He facilitated where they were confused.

During the practice phase, he divided the students into two groups and instructed them to converse based on the given text exercises B and C. Two students were chosen to present a dialogue, specifically focusing on asking for permission. The students were busy in the conversation about the application of the topic. Using

laptops and projectors facilitated their presentation, making their contributions more engaging and visually interesting. ICT tools played a crucial role in enhancing the students' preparation and presentation of the content.

During the evaluation phase, the teacher prompted the students to provide appropriate expressions for specific situations. Students actively participated by sharing answers and engaging in the evaluation process. This active involvement indicated their understanding and retention of the material.

At last, he summarized the text, reinforcing key points and concepts covered during the session. This summary helped combine the student's learning and provided closure to the lesson. Students were assigned homework that required them to write conversations for given situations in their textbooks. They were encouraged to share their work with both their peers and the teacher. He asked the students to use their parents' smartphones for further understanding. The teacher's use of internet resources and a laptop highlighted the integration of ICT into homework assignment practices.

A Vignette of Harish's Class

Harish has been teaching at Adarsh Secondary School as an English teacher. He teaches classes 9 and 10 compulsory English. In the observation, he taught class 10 lesson 10, 'Population and Migration,' grammar secession teaching topic was 'Pronunciation/r/sound' words.

In the warm-up, Harish entered the classroom with a warm smile and greeted the students with phrases like "Good morning, all of you" and "How do you do?" The students reciprocated the greeting by saying, "Good morning, Sir" and "How do you do, sir?"

The teacher started the session during the presentation phase by summarizing the previous lesson. He wrote certain words from the text on the board and

encouraged the students to guess the topic for the day. He displayed word cards and their phonetic transcriptions on the whiteboard and asked the students to read and learn them. The teacher then played video clips through a sound box, prompting active listening.

During the practice, students were instructed to read the entire text and identify difficult words, along with their contextual uses. The teacher further encouraged them to utilize Google and dictionaries to find the meanings of these words. Afterward, the teacher read the complete text with proper pronunciation.

For evaluation, the teacher wrote word descriptions on the board and tasked students with identifying the corresponding single words from the text. However, only a limited number of students managed to connect the descriptions to the words successfully.

At last, a summary of the text was provided to wrap up the lesson. The students were assigned homework to write conversations based on given situations in the textbook and share their work with friends and the teacher.

Analysis of the Vignettes of Classes by the Participants

The class vignettes mentioned above can be viewed in terms of the status of using digital devices in the ELT classroom, the status of using digital tools and materials in the ELT classroom, and the status of incorporating ICT in pedagogical practices as follows.

Status of Using Digital Devices in the ELT Classrooms

The utilization of digital and ICT devices in English language classrooms was discussed through six vignettes, each describing a different teacher's teaching approach and the role of technology in their classes. These vignettes offer insights into how teachers integrate digital devices into their language instruction.

In the first vignette highlighting Gita's class, the focus is on traditional teaching methods. Gita employs a chalk-and-talk approach, relying on verbal explanations, teacher-led discussions, and textbook references. The absence of digital devices highlights a teacher-centered approach, where knowledge is conveyed through spoken words and handwritten notes. Despite having a mobile phone, she doesn't utilize it in the classroom.

In the second vignette, Ramesh's class also follows traditional teaching methods. Ramesh predominantly relies on verbal explanations, teacher-led dialogues, and the textbook. Despite having a mobile phone and laptop, he does not integrate ICT tools into his teaching.

The third vignette, highlighting Shambu's class, demonstrates the successful integration of technology. Shambu employs a multimedia projector and laptop to deliver an engaging lesson on voice in grammar. His PowerPoint presentation, video clips, and interactive activities captivate students' attention and facilitate active learning. The use of ICT improves students' participation and understanding.

In Rita's class, as depicted in the fourth vignette, the teacher employs a more teacher-centered approach. Limited use of technology, such as using a mobile phone to search for word meanings on Google, is observed. However, the class lacks student engagement and interactive and creative assignments. The use of the mother tongue briefly stimulates more active responses from students.

The fifth vignette describes Umesh's class, where a student-centered approach is highlighted. The teacher integrates ICT tools effectively, such as laptops, projectors, and video clips. The class is engaging and interactive, encouraging students' participation and understanding. Assignments are creative and technology-driven, contributing to a dynamic learning environment.

Lastly, in the sixth vignette, Harish's class presents a mixed approach. While the teacher uses a mobile phone for certain activities, the class mainly relies on traditional methods. The teacher's focus on specific students and limited use of technology might hinder equal participation.

Reflective notes combined throughout the vignettes provide a deeper understanding (of what?). They emphasize the importance of a child-friendly and ICT-friendly classroom environment. Teachers are encouraged to adopt innovative teaching strategies that encourage student engagement, interaction, and collaboration. The reflective notes emphasize the potential benefits of integrating ICT tools beyond mobile phones, promoting a dynamic and inclusive learning environment.

In conclusion, the vignettes offer a variety of perceptions on integrating digital and ICT devices in English language classrooms. From traditional approaches to more technology-driven methods, the vignettes demonstrate the impact of teaching strategies and the role of technology in encouraging student engagement, comprehension, and participation.

Status of Using Digital Tools and Materials in the ELT Classrooms

The use of software, apps, and digital/ICT tools and materials in English language classrooms was discussed in the six vignettes illustrating different teaching approaches and technology integration.

The first vignette shows a traditional teaching style where Gita employs verbal explanations, discussions, and references to the textbook. The absence of digital devices indicates a teacher-centered approach with knowledge transmitted through spoken words and handwritten notes. No ICT tools are employed, emphasizing dependence on textbooks, handwritten notes, and face-to-face interactions. Similarly, Ramesh follows a traditional approach, using verbal explanations and the textbook for

his lesson. Despite possessing a mobile phone and laptop, no ICT tools are integrated into his teaching practices.

Shambu's class demonstrates successful technology integration. Using a laptop and multimedia projector, he employs PowerPoint presentations, video clips, and interactive activities to engage students in learning. This use of ICT improves students' participation and understanding.

The vignette depicting Rita's class reveals a more teacher-centered approach with limited use of technology. Rita occasionally uses a mobile phone to search for word meanings on Google. However, her class lacks student engagement and interaction, along with the absence of creative assignments. Along the same line, Umesh implements a student-centered approach and effectively integrates ICT tools such as laptops, projectors, and video clips. The class environment is dynamic and engaging, promoting active student participation. Creative tasks and technology-driven assignments contribute to an interactive learning environment.

The final vignette portrays a mix of teaching methods. Harish uses a mobile phone for certain activities but predominantly employs traditional teaching techniques. His focus on specific students may limit equal participation. While technology is minimally used, video clips and sounds contribute to an interactive class environment.

Reflective notes combined throughout the vignettes emphasize the importance of a child-friendly and ICT-friendly classroom environment. Teachers are encouraged to adopt innovative strategies promoting student engagement and participation. The reflective notes highlight the potential benefits of incorporating diverse ICT tools beyond mobile phones to create an inclusive and effective learning environment.

In conclusion, the vignettes highlight various perceptions of integrating software, apps, and digital tools in English language classrooms. They demonstrate the influence of teaching strategies and the role of technology in improving students' engagement, understanding, and participation. ICT tools, when appropriately integrated, improve the learning experience by promoting interaction, creativity, and inclusiveness.

Status of Using ICT in Pedagogical Practices

The status of using ICT in pedagogical practices within English language classrooms can be depicted through six vignettes. These vignettes present different levels of ICT integration and provide perceptions of how technology influences teaching methods, student engagement, and learning achievements.

Gita's class shows a traditional teaching approach. Although technology is available as a mobile phone, it is not used appropriately. Gita's pedagogy focuses on verbal explanations, discussions, and textbook references. The absence of ICT tools results in a teacher-centered environment where learning primarily relies on verbal communication and handwritten notes. Similarly, Ramesh follows traditional methods without incorporating ICT tools. His use of verbal explanations, dialogues, and textbook references signifies a teacher-centered approach. Despite the widespread use of mobile phones and laptops, Ramesh follows traditional teaching methods and techniques.

Shambu's class stands, in contrast, for the effective use of ICT integration. He uses multimedia presentations through laptops and projectors to teach complex concepts. He employs PowerPoint slides, videos, and interactive activities that improve student engagement, making learning more interactive and visually exciting. Likewise, Rita's class highlights the limited utilization of ICT tools. Although she

employs a mobile phone to search for word meanings, her teaching is mostly teacher-centered. A lack of student engagement and participation, and minimal use of technology, results in a less interactive classroom.

Umesh's class offers a student-centered approach enhanced by ICT integration. By using laptops, projectors, and internet resources, Umesh engages students with interactive video clips and discussions. The integration of technology increases active participation, comprehension, and collaborative learning. Likewise, Harish's class demonstrates a partial implementation of ICT tools. He employs a mobile phone and video clips to supplement traditional teaching methods. However, the limited use of technology and focus on select students' participation might hinder a comprehensive learning environment.

Throughout these vignettes, a common theme develops regarding the positive impression of ICT on pedagogical practices. The effectiveness of ICT tools is proved in cases like Shambu and Umesh, where multimedia presentations and interactive activities improve dynamic learning environments. Conversely, the limited use of ICT tools, as observed in Rita's and Harish's classes can result in a less dynamic learning environment.

The reflective notes in the vignettes emphasize the significance of creating a child-friendly and technology-friendly classroom environment. Although traditional teaching methods have advantages, integrating ICT tools can increase involvement, interaction, and overall learning achievements.

It is clear that adopting a balanced approach and integrating advanced ICT tools with traditional techniques can result in more inclusive and interactive learning environments. To maximize the advantages of technology, teachers must intend for a harmonious fusion of pedagogical strategies and the thoughtful integration of ICT

tools. This should provide various learning preferences and a dynamic classroom experience.

Summary of the Qualitative Results on the Practices of ICT in ELT

The vignettes provide the perceptions on integrating ICT in English language teaching (ELT) practices. These examples include a variety of teaching methods, demonstrating the utilization of digital devices, digital tools, and materials, as well as the integration of ICT.

In the first vignette, Gita uses a traditional approach, depending on verbal communication and handwritten notes. Although she has a mobile phone, it is not used in her teaching. Similarly, in the second vignette, Ramesh employs traditional methods, with minimal integration of ICT tools despite having access to them. Shambu's class, in contrast, represents successful ICT integration. Using laptops and projectors, he utilizes multimedia presentations to increase students' engagement and comprehension.

Rita's vignette highlights limited ICT utilization. A mobile phone is occasionally used for word meanings, but engagement and interactive assignments are lacking. In Umesh's class, he follows a student-centered approach with effective ICT integration, employing laptops, projectors, and internet resources for interactive learning experiences. Harish's class, in the final vignette, presents a mix of traditional methods and partial ICT integration, mainly through mobile phone use.

These vignettes emphasize the importance of creating a child-friendly and technology-friendly classroom environment. Blending traditional teaching methods with innovative ICT tools can create more inclusive and engaging learning environments, addressing various students' needs and interests.

Merged and Compared the Results of Quantitative and Qualitative Data: Joint Display of Teachers' Level of Practices

The joint display of teachers' level of knowledge integrates both quantitative and qualitative results, as presented separately at first and then combined later which is illustrated in the following table.

Table 33

Joint Display of Teachers' Level of Practices

Sub-dimensions	Quantitative result	Qualitative result	Combined result (QUAN+QUAL)
Use of ICT devices in the classroom	Using a laptop in the ELT classroom (mean = 2.99) - medium. Using the Web/blog (mean =2.52)- Medium. Significant differences in district, availability of digital resources in school, and training status.	The vignettes offer a variety of perceptions on integrating digital and ICT devices in English language classrooms. From traditional approaches to more technology-driven methods, the vignettes demonstrate the impact of teaching strategies and the role of technology in encouraging student engagement, comprehension, and participation.	Both results indicate a medium level of ICT use in English language teaching classrooms, with significant differences based on district, resource availability, and teacher training. The qualitative data emphasizes the importance of these tools in improving student engagement and learning outcomes
Use of Digital tools and materials in the ELT classroom	Participating social network (mean =2.95) - Medium. Creating and maintaining blogs/websites (mean 2,40)- Medium. Significant differences in district, availability of digital resources in school, and training status.	The vignettes highlight various perceptions of integrating software, apps, and digital tools in English language classrooms. They demonstrate the influence of teaching strategies and the role of technology in improving students' engagement, understanding, and participation.	The results indicate a medium level of use of digital tools and materials in English language teaching classrooms, with significant differences based on district, resource availability, and teacher training. The qualitative data highlights the importance of these tools in improving student engagement and learning outcomes, showcasing diverse approaches and perceptions

Use of ICT pedagogical practices in the ELT classroom	Using educational apps(mean=2.94)-medium. Preparing materials to use with an interactive whiteboard (mean =2.47). Significant differences in district, availability of digital resources in school, and training status.	The vignettes emphasize the significance of creating a child-friendly and technology-friendly classroom environment. Although traditional teaching methods have advantages, integrating ICT tools can increase involvement, interaction, and overall learning achievements.	among teachers. There is a medium level of proficiency in using educational apps and preparing materials for interactive whiteboards among teachers. Significant differences exist based on district, resource availability, and training status. Qualitative perceptions highlight the benefits of integrating ICT tools to create a more engaging and effective learning environment, complementing traditional teaching methods.
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Merged and compared results: The quantitative data reveal that the use of digital devices in English language teaching (ELT) is generally at a medium level. Teachers frequently utilize computers, multimedia projectors, and internet resources, though tools like language laboratories and learning platforms are less commonly used. This pattern is supported by qualitative data, which show that while some teachers, such as Shambu and Umesh, effectively incorporate digital devices into their teaching, others, like Gita and Ramesh, rely more on traditional methods. This variation underscores how individual teaching practices can influence the overall usage patterns observed in the quantitative data.

In terms of digital tools and materials, the quantitative results indicate a medium level of usage. Teachers engage in activities like using social networks and basic digital functions but are less involved in specialized tasks such as developing online test items. The qualitative data align with this medium-level usage, with teachers like Shambu and Umesh actively employing digital tools, while others like Rita and Gita show limited engagement. This consistency between quantitative and

qualitative findings highlights a general trend of medium-level digital tool usage and illustrates specific ways these tools are applied in teaching.

Regarding ICT integration into pedagogical practices, quantitative analysis shows medium-level integration, with teachers utilizing educational apps, virtual classrooms, and other digital tools but showing less engagement with interactive whiteboards. Qualitative data provide specific examples, with teachers such as Shambu and Umesh effectively using ICT to enhance their pedagogical practices, while others like Gita and Ramesh exhibit less integration. This merged view underscores the general trend of medium-level ICT integration and the specific challenges and successes experienced by different teachers.

Overall, both quantitative and qualitative data indicate a medium level of ICT integration in English language teaching. Quantitative data offer a broad overview of usage levels and influencing factors, while qualitative data provide detailed examples of how these trends manifest in practice. Teachers recognize ICT's potential to enhance various aspects of teaching, but their levels of integration and effectiveness vary.

The comparison of quantitative and qualitative data reveals that the use of digital devices and tools in ELT is consistently at a medium level. Quantitative data provide a general picture of usage patterns and influencing factors such as district and resource availability, while qualitative data offer specific insights into how these patterns play out in individual classrooms. This comparison highlights that although digital devices and tools are used, their effectiveness and integration vary significantly among teachers.

Similarly, the comparison of digital tool usage shows the alignment between quantitative and qualitative results. Both datasets reflect medium-level engagement

with digital tools, with quantitative data outlining overall usage trends and qualitative data providing examples of how these tools are implemented. This suggests that while digital tools are integrated into teaching practices, there is considerable variation in their effectiveness, indicating a need for improved access and training.

The comparison of ICT integration into pedagogical practices also reveals a consistent medium level of usage. Quantitative data detail the overall patterns and factors affecting ICT integration, while qualitative data offer context-specific examples. This indicates that while ICT is utilized to some extent in teaching, significant variability in its application suggests a need for targeted support and professional development to enhance its effectiveness.

In conclusion, the merged and compared results demonstrate that while ICT is integrated into English language teaching at a medium level, there is significant variability in its application and effectiveness. Both quantitative and qualitative data indicate a recognition of ICT's benefits but also highlight the need for improved support and training to maximize its potential in educational settings.

Interpretation of Practices in ELT Classroom

The interpretation of the data highlights a generally medium level of ICT usage in English Language Teaching (ELT), as indicated by both quantitative and qualitative findings. The quantitative data reveal that digital devices, such as computers, multimedia projectors, and internet resources, are utilized to a moderate extent in ELT classrooms. However, tools like language laboratories and learning platforms are less frequently employed. This trend is consistent with qualitative observations, where some teachers effectively incorporate ICT into their teaching practices, such as Shambu and Umesh, while others, like Gita and Ramesh, primarily rely on traditional methods. This discrepancy underscores a broader trend of medium-

level ICT integration and emphasizes the need for a more comprehensive utilization of available digital resources.

Further analysis of the quantitative data indicates that while digital tools and materials are used at a medium level, certain areas, such as online test development and the use of interactive whiteboards, show lower levels of engagement. Qualitative insights support this finding, demonstrating that teachers like Shambu and Umesh are making significant strides in using digital tools for interactive and engaging learning experiences, whereas others, such as Rita and Gita, exhibit limited ICT engagement. This alignment between the data sets suggests that while there is general acceptance of ICT's potential, its effective implementation varies considerably among teachers.

In conclusion, the combined analysis of quantitative and qualitative data points to a need for enhanced support and targeted professional development to improve ICT integration in ELT. While the current level of ICT use is moderate, there are noticeable differences in how effectively it is employed. Addressing these inconsistencies by providing targeted training and resources could bridge the gap between varying levels of ICT use among teachers. By fostering a more inclusive and effective use of digital tools, educational outcomes can be enhanced, ultimately benefiting both teachers and students in the evolving landscape of language education.

Chapter Summary

In this chapter, the study focused on observing how teachers incorporate ICT into their teaching by examining their use of digital devices, digital tools, and materials, and the integration of ICT in pedagogical practices. This comprehensive approach aimed to understand the practical application of ICT in ELT and how it enhances the learning experience.

The findings revealed that secondary-level English language teachers are increasingly utilizing digital devices such as laptops, projectors, and tablets to facilitate their lessons. Additionally, teachers are incorporating various digital tools and materials, including educational software, online resources, and multimedia content, to enrich their teaching and engage students more effectively. The use of ICT in pedagogical practices was also highlighted, showing that teachers are adopting innovative methods to create interactive, student-centered learning environments. These insights highlight the importance of continuous professional development and support for teachers to fully harness the potential of ICT in ELT classrooms.

Chapter Seven

Findings and Discussion: Dialoguing With the Literature

In this chapter, I present a brief discussion based on the findings and analysis extracted from Chapters four, five, and six. This comprehensive synthesis summarizes the research under distinct headings, describing the level of teachers' knowledge of ICT, their perceptions of ICT, and their practices in utilizing ICT in the ELT classroom. This chapter not only explores the main perceptions derived from the position of knowledge, perception, and practice but also highlights the encountered limitations and reflective insights throughout my study. By making a harmonious dialogue between the research findings and the existing literature, this chapter highlights the significance of this study within the broader area of education and technology integration.

Teachers' Level of Knowledge

As this study is a convergent mixed methods research design, I present the quantitative and qualitative findings regarding the participants' level of knowledge of ICT, and their dialogues with the existing literature and theoretical framework, i.e., EFL-TPACK. Such combined quantitative and qualitative findings provide a comprehensive understanding of English language teachers' knowledge and utilization of ICT in the context of hardware usage, fundamental concepts, educational apps and software, internet surfing, and pedagogical practices.

In this quantitative analysis, the results indicate that teachers' familiarity with hardware and fundamental digital concepts was moderate, with variations observed based on demographic factors such as district, qualification, experience, employment status, availability of digital resources, and ICT training. Teachers demonstrated medium-level knowledge of educational apps and software usage, with significant

influences from qualification, availability of digital devices, condition of digital resources, and ICT training. Similarly, their ability to search the internet and integrate ICT in teaching showed a medium-level understanding, with significant impacts from the district, experience, employment status, availability of digital devices, condition of digital resources, and ICT training. Such claims seem to be appropriate and natural. In this case, qualitative data/insights also reveal the impact of external factors, such as the COVID-19 pandemic, teachers' learning courses, etc. For example, Harish's practical method of enhancing digital skills during the pandemic highlights the role of continuous professional development. Furthermore, the varying levels of understanding among teachers, as highlighted qualitatively, align with the quantitative data emphasizing the need for training programmes. These quantitative as well as qualitative findings are in consonant with the argument of Ghasemi and Hasheni (2011), Nankani and Olalvo (2010), Ertmer et al. (2012) and Kukulska-Hulme and Shield (2008). For example, Ghasemi and Hasheni (2011) argue that the knowledge of ICT is essential for successful teaching for the overall development of English language teaching and learning. The knowledge and utilization of modern ICT devices, such as online dictionaries, websites, YouTube channels, and blogs, create a real-life environment that enhances teachers' and learners' knowledge and confidence. Similarly, these findings also resonate with the Teacher Competency Framework (2016) of CDC Nepal, highlighting the need for teachers' ICT competence in designing and creating digital materials for teaching and communication. It also focuses on integrating ICT into daily pedagogical activities that can help refresh and enhance their ICT-related knowledge and skills in ELT classrooms.

Furthermore, the finding regarding the level of teachers' knowledge of hardware usage was found to be moderate level, indicating that additional skills

should be needed for its improvement. Such a moderate level of skills might have been caused by the sample of the works that have been taken from remote areas of Nepal. Similar findings have been revealed in the studies conducted by Laudari (2019) and Varughese (2011), who have described that geographical barriers also influence teachers' knowledge and use of ICT. In this regard, qualitative narratives emphasize the impact of the learning environment on teachers' proficiency. For instance, Umesh's comprehensive understanding, coupled with limitations due to the unavailability of certain devices in his school, emphasizes the practical challenges teachers face. Similarly, Shambhu's willingness to share knowledge highlights the possibility of collaboration and knowledge exchange among teachers. These qualitative narratives align with the quantitative finding of regional differences, emphasizing context and environment's importance in shaping teachers' familiarity with hardware. Such understanding consonants related with Kazoka and William (2016), Rana (2018), and Paudel (2020). For example, the findings of Kazoka and William (2016) have revealed a significant number of secondary school teachers who lacked sufficient knowledge and familiarity with utilizing ICT facilities in the teaching and learning process.

Moving to the teachers' proficiency in fundamental concepts of digital devices, the analysis explores teachers' understanding of operating systems, file management, searching, and the use of printers and scanners. The overall mean proficiency level suggests a moderate understanding of these fundamental concepts. Within this domain, teachers exhibit higher proficiency in basic computer operations and lower proficiency in searching for data on hard disks. Furthermore, the qualitative data/information supports the quantitative results. This finding is found in the line of Lim and Tay (2003), Chapelle (2001), and Nankani and Olalvo (2010). In addition,

these devices offer unique educational advantages, which include portability, connectivity, the ability to change data and collaborate, context sensitivity, individuality, enabling multiple modalities, supporting student improvisation as needed within the context of learning, and supporting learning in the change (Klopfer et al., 2002; Liu et al., 2020).

Regarding the knowledge of educational apps and software, the analysis now focuses on teachers' knowledge of educational apps and software, including word processing, presentation tools, spelling checkers, and virtual classes. The overall proficiency level reflects a moderate level of knowledge. However, variations emerge across specific items with higher proficiency in word processing and lower proficiency in virtual classrooms. This finding contradicts Fakeye's (2010) finding that English language teachers' knowledge of ICT is quite poor. Likewise, qualitative narratives depict varying proficiency levels and highlight the need for targeted interventions. Teachers like Harish effectively use educational apps, in contrast with others, such as Gita, who may benefit from focused training. The qualitative data thus triangulates with quantitative findings, offering a different understanding of teachers' abilities in this domain. Similar findings were depicted in the studies conducted by Al-Dheleai and Tasir (2017), Wessels and Diale (2017), and Dhyani and Sharma (2022).

Moreover, in the case of the knowledge of internet surfing abilities, the assessment of teachers' ability to support the internet for educational purposes comes next, including tasks such as using Google Sites, sending/receiving emails/SMS, and participating in social media. The overall proficiency level indicates a moderate level of knowledge. Similarly, qualitative data show that many teachers rarely use ICT for internet searching. However, many challenges were faced by the teachers, such as

Umesh, in implementing internet-based activities despite knowing. The need for a supportive environment is emphasized, aligning with the quantitative finding that shows a significant impact of the availability of digital devices and the condition of digital resources on teachers' internet surfing knowledge. This finding supports the study conducted by Kadel (2014), who finds out that many teachers use the internet to get general information followed by accessing online newspapers, chatting, social networking, sending and receiving e-mails, and entertainment besides academic use. Furthermore, Godwin-Jones (2018) describes the Internet as providing access to vast resources, including authentic materials, language exchange platforms, and online courses, fostering autonomous learning. It shows that teachers lack such types of technological knowledge because it varies across specific tasks and areas.

The final dimension under consideration is teachers' knowledge of using ICT in pedagogical practices, including activities such as making notes, developing lesson plans, and integrating authentic tasks. The overall proficiency level reflects a moderate level of knowledge. Proficiency varies across specific pedagogical tasks, underlining the nature of teachers' ICT integration in teaching practices. Such quantitative analysis has further been supported by qualitative narratives that reveal a dynamic landscape influenced by factors such as the learning environment, exposure to technology, and individual motivations. Teachers like Harish view technology as a transformative tool, while others face challenges incorporating it. The qualitative data supports and adds depth to the quantitative findings, emphasizing the difficult nature of teachers' knowledge (Ghavifekr et al., 2014; Ertmer et al., 2012; Laudari, 2019). For instance, Laudari's (2019) observations on transformative pedagogy through active learning, their experience, and the link between possessing digital devices and

higher ICT proficiency resonates with emphasis on technology access in the learning environment.

While discussing these findings demographically, teachers from the Kailali district have higher proficiency levels in hardware usage, fundamental concepts of digital devices, educational apps and software, internet surfing, and ICT in pedagogical practices than those from Achham and Bajhang. It might be so since Kailali is comparatively developed and the capital city of Sudurpaschim Province, whereas Achham and Bajura are remote and underdeveloped mountainous districts of the Sudurpaschim province. Thus, it needs to promote ICT proficiency in the Achham and Bajhang districts. This finding consonants related with the previous study by Rana (2018), who found similar results that teachers in rural areas had the lowest level of knowledge because of various problems in rural areas than in urban. Similarly, Master/MPhil-qualification teachers show a slightly superior level of knowledge on familiarizing hardware usage, fundamental digital devices, and ICT in pedagogical practices, compared to their Bachelor-level qualification teachers but in the level of knowledge in educational apps and software and internet surfing of Master/MPhil qualification teachers has a higher level than Bachelor qualification teachers. It might be so due to the incorporation of ICT-related courses and practices at the Master/MPhil level.

Likewise, based on the experience of teachers, the knowledge of familiarizing with hardware, fundamental digital devices, internet surfing, and ICT in pedagogical practices having experience of more than 15 years was found to be higher level than 11-15 years, 5-10 years and less than 5 years. But only in the knowledge of education apps and software, having experience 5-10 years teachers have found a high level of knowledge. Similarly, based on the employment status, the knowledge of using

familiarizing hardware and pedagogical practices of permanent teachers is higher than that of temporary teachers. The findings of this study show demographic factors that play a vital role in the use of ICT in English language classrooms. Such discussions have also been made by Mwendwa (2017), Rana (2018), Cosgun and Savaş (2019), and Acharya (2014). For example, Mwendwa (2017) identifies several factors influencing teachers' adoption of computer use, such as pedagogical issues, familiarity with computers, teachers' training, time availability, and hardware usage and software.

However, a medium knowledge of permanent teachers was found in the knowledge of the fundamental concept of digital devices, educational apps and software, and internet surfing than temporary teachers. The reason for this is that the policy of the government is to provide lots of opportunities to permanent teachers but less priority to temporary teachers. Likewise, the availability of digital resources in good condition at school's teachers' knowledge was found to be the highest level in hardware usage, educational apps and software, internet surfing, and ICT in pedagogical practices than the availability of digital resources in good, poor, moderate, and very good condition at school's teachers. But medium-level knowledge fundamental concept of ICT devices was to be found in good condition at school's teachers availability of digital resources in good condition at school. Supporting this, Poudel (2020) states that teachers have varied knowledge of ICT in the use of English language classes based on their social, geographical, educational, and other backgrounds.

Moreover, teachers have ICT-related training seem to have higher proficiency levels in hardware usage, fundamental concepts of digital devices, educational apps and software, internet surfing, and ICT in pedagogical practices than those not having

ICT-related training. The English language teachers' proficiency in these areas of ICT highlights the crucial role of training in enhancing ICT proficiency. It emphasizes the need to integrate training programmes into professional development initiatives. Such importance could be observed in the study of Joshi (2017), Jimoyiannis (2012), Nechita and Timofti (2011), and Beyene and Zerai (2014). For instance, Joshi (2017) describes that taking ICT-related training, regularly updating with ICT, and properly using ICT in teaching practice were major roles of teachers and their ICT-related skill improvement.

Regarding the theoretical framework, i.e., EFL-TPACK and literature, the study explores English language teachers' ICT proficiency using the EFL-TPACK framework (Mishra & Koehler, 2006). It also describes teachers' technological knowledge, such as hardware familiarity, digital concepts, app knowledge, internet skills, and ICT integration in teaching.

Perceptions of English Language Teachers on ICT

This thematic analysis presents a complicated exploration and analysis of the perceptions of secondary-level English language teachers regarding the utilization of ICT in their classrooms. This study sought to explore the teachers' perspectives on the use of ICT across several thematic dimensions. This chapter not only shows teachers' general viewpoints but also analyses possible variations based on demographic factors, offering an understanding of the complex relationship between teachers, technology, and pedagogical practices.

In this regard, English language teachers have a high perception of ICT as a motivating tool. This includes all aspects, such as finding learning activities interesting and enjoyable, managing classroom behavior, reducing student repetition rates, fostering positive student attitudes toward learning, increasing motivation,

enhancing students' understanding, promoting independent learning, improving attendance rates, decreasing student dropouts, increasing enrollment rates, and facilitating monitoring of student progress. From the qualitative perspective, strategies such as incorporating multimedia elements, interactive quizzes, and online discussions were reported to enhance student engagement and eagerness. For example, Harish's emphasis on creating dynamic and enjoyable learning experiences through videos and interactive quizzes was particularly significant. However, various perspectives developed, with Umesh expressing doubt about the universal appropriateness of ICT and concerns about possible distractions. In this sense, both quantitative and qualitative data highlight the complexity of integrating ICT for motivation. Such arguments of this study are consonant with Liang et al. (2011) and D'Angelo (2018). For instance, Liang et al. (2011) state that using technology in teaching makes students more interested and involved in learning.

However, teachers perceive learning activities as interesting and enjoyable, while they find it more challenging to manage classroom behavior effectively. While the overall perception is positive, the variations highlight the need for targeted strategies that consider individual preferences and address concerns such as distractions. The district-wise differences emphasize the influence of local contexts on teachers' perceptions, indicating the importance of context-specific interventions. Such findings have been seen in favor of research works by Joshi (2017), Wujabudula (2018), Yunus et al. (2009), and Suwannasom (2010).

Similarly, teachers, on the whole, perceive ICT as highly beneficial for pedagogical activities; this position, with global acknowledgment of technology's transformative impact on teaching and learning, affirms the potential of ICT to reshape traditional pedagogical approaches. From the item-wise analysis, while

teachers express strong agreement with the convenience of storing both teachers' and students' documents using ICT, the aspect of making learning activities easy and trouble-free received a slightly lower score. This differentiation suggests a potential area for enhancement in fluently integrating ICT into daily teaching practices, minimizing obstacles, and optimizing its pedagogical impact. In the same line, qualitative findings confirmed the positive perception of ICT in transforming pedagogical practices. Harish, for example, highlighted the use of multimedia presentations to enhance content comprehension and the potential of tools like Microsoft PowerPoint. However, Shambu highlights the major challenges faced by teachers in resource-constrained environments as viewed by many scholars (Jatileni & Jatileni, 2018; Toktarova & Semenova, 2020). Similarly, such findings resonate with Toktarova and Semenova's (2020) understanding, in which they highlight the importance of integrating digital transformation into education to effectively address traditional pedagogical challenges for the potential of digital pedagogy.

Furthermore, quantitative and qualitative data emphasize the transformative role of ICT in pedagogical activities, with multimedia presentations and online tools being highlighted as effective strategies. District-wise variations and the influence of qualifications stress the need for infrastructure development and addressed interferences. The findings suggest that while there is a positive perception, addressing practical barriers is crucial for maximizing the impact of ICT in pedagogy, in line with Kohnke (2021), who recognizes that ICT plays a pivotal role in teachers' pedagogical proficiency in technology for effective integration in classrooms.

Moreover, a positive perception towards ICT as a tool for self-learning occurs. This collective acknowledgment highlights the major role of technology in enhancing individualized learning experiences. From the item-wise analysis, teachers agree that

ICT facilitates the development of documents effectively. However, the enjoyment derived from using computers to learn English received a slightly lower significance indicating a complex perspective on the enjoyment aspect of self-learning through ICT. Moreover, qualitative perceptions supported the quantitative data. Harish, Umesh, and Rita highlighted the importance of online platforms, digital libraries, and language-learning apps. Concerns were raised about possible misuse of online resources, emphasizing the need for carefulness and selectivity. For this, quantitative and qualitative data highlight the common acknowledgment of ICT as an essential tool for self-learning, with differences across districts and qualifications. Such a view has been understood as self-directed learning by Paudel (2020), and Jorge et al. (2003). Furthermore, the findings suggest that ICTs are essential tools that effectively facilitate the teaching and learning of the English language, as viewed by Jayanthi and Kumar (2016).

In addition, the overall positive perception of ICT as a tool for professional development is evident. This stresses technology's potential to contribute significantly to continuous professional growth among English language teachers. In this regard, teachers express particular appreciation for ICT's role in increasing knowledge across different sectors and advancing discussions on teaching ideas. Qualitative data resounded the quantitative findings regarding the transformative role of ICT in continuous professional development. Online courses, webinars, and educational platforms were highlighted as valuable resources. Selectivity in utilizing ICT resources and adapting to the changing educational landscape were emphasized. In this regard, both quantitative and qualitative data emphasize the positive impact of ICT on professional development, with district-wise variations and the condition of digital resources at school playing a significant role. Qualifications, experience,

employment status, and the availability of digital devices showed limited impact. The findings suggest that district-specific factors and the quality of digital resources are crucial considerations for effectively utilizing ICT in professional development. Such argument has been supported by Coldwell (2017), Vereijken et al. (2018), Cosgun and Savaş (2019), and Munna et al. (2021). For instance, Vereijken et al. (2018) describe the role of ICT in the technological and pedagogical skills they need to teach twenty-first-century students.

Moreover, the aspect of ICT contributing to lifelong learning and sustained professional growth cultivated a relatively lower score, a presentation of an area where teachers predict possible improvements in the integration of ICT for sustained professional development. Such synthesized findings emphasize a collective recognition among English language teachers in the studied regions regarding the essential value of ICT in education. However, the variations require targeted strategies for improvement, considering the diverse contexts in which teachers function.

Significant variations across districts exist in the demographic exploration of English language teachers' perceptions of ICT as a tool for motivation, self-learning, professional development, and pedagogical activities. The perception of teachers in the Bajhang district has a significantly higher level compared to the Kailali and Achham districts. The result indicates that teachers of Bajhang have highly motivated ICT needs and compulsory tools and resources used in English language teaching in the classroom and revolutionary changes in the teaching field. However, they did not frequently use even mobile or laptop tools in the classroom. Furthermore, Bajhang district and bachelor-level qualifications emerge as influential factors in teachers' favorable perceptions of ICT as a tool for self-learning/individual learning, while

experience, employment status, the availability of digital devices, and ICT-related training show limited impact. However, the condition of digital resources at school significantly influences teachers' perceptions in favor of those with good conditions. Dialoguing with literature, an overall positive attitude among teachers toward ICT seems to be motivational, aligning with “global trends” (Rana et al., 2022; Liang et al., 2011). However, variations across districts, particularly higher motivation in Bajhang, suggest “regional influences” on perceptions emphasizing the need for context-specific interventions (Rana, 2018; Kazoka & William, 2016).

However, qualification does not play a significant role in shaping teachers' perceptions, as participants with master/MPhil qualifications demonstrate similar perceptions to those with bachelor-level qualifications, indicating insignificance in this aspect. Perception of teachers with bachelor-level qualifications in ICT as self-learning, pedagogical, and professional development seems higher than those teachers with MPhil/Master level qualifications. The result shows that bachelor-level teachers have updated in the latest ICT tools and resources. In this regard, qualification with bachelor-level teachers in Bajhang exhibits positive perceptions, indicating a “correlation between qualification, technological literacy, and positive attitudes” (Ghavifekr et al., 2014; Al Harbi, 2014).

Exploring the impact of teaching experience, significant differences in perception of the teachers with less than 5 years of experience are observed in ICT as a tool for self-learning than others. But in other dimensions, there is no significant difference among teachers with varying years of experience (5-10 years, more than 15 years, less than 5 years, and 11-15 years). Only the subdimension of ICT as a tool for motivation seemed to have a higher perception of teachers with 5-10 years, but other

dimensions, such as ICT as a tool for pedagogy and professional development seemed higher perception of teachers with less than 5 years.

Similarly, employment status does not significantly influence teachers' perceptions, with temporary teachers having similar perceptions to permanent teachers. Regarding employment status in all subdimensions, such as ICT as a tool for motivation, self-learning, pedagogical practices, and professional development, temporary teachers express slightly higher perceptions compared to permanent teachers.

However, the condition of digital resources at school significantly impacts teachers' perceptions, with those in schools with good conditions expressing significantly higher perceptions than those with poor, moderate, and very good conditions. Regarding having digital devices in subdimensions such as ICT as a tool for self-learning and professional development, teachers with digital devices express slightly higher perceptions, but ICT as self-learning and motivation teachers with no digital devices express higher perceptions. However, the condition of digital resources at school significantly influences teachers' perceptions, with teachers having access to resources in good conditions exhibiting higher perceptions than those with poor, moderate, and very good conditions. While teaching experience influences attitudes, factors like “employment status, digital device availability, and ICT-related training” show limited impact (Wujiabudula, 2018; Jatileni & Jatileni, 2018).

Lastly, ICT-related training does not significantly impact teachers' perceptions, as those with training show similar perceptions to those without training. However, trained teachers have slightly higher perceptions in all subdimensions, such as perceptions towards ICT as a tool for motivation, self-learning, pedagogical activities, and professional development. Interestingly, ICT-related training does not

significantly influence teachers' perceptions, with trained teachers having similar perceptions to those without training. This argument supports Rana et al. (2022), who state that the utilization of ICT in the classroom enhances the confidence of both teachers and students, in their ability to use it, and training in teaching and learning fosters achievement and motivation.

The findings from both quantitative and qualitative highlight a collective recognition among English language teachers in the studied regions regarding the inherent value of ICT in education. However, Specific strategies for improvement are needed to accommodate the differences in the various situations in which teachers function. District-wise differences emphasize the influence of local contexts on teachers' perceptions, justifying improved interventions that consider these contextual complexities. Such findings are in consonant with Rana et al. (2022) who highlight the complexities and difficulties encountered by teachers in rural areas of Nepal concerning ICT training and implementation. This thematic analysis explores English language teachers' perceptions of Information and Communication Technology (ICT) in their classrooms, guided by the theoretical framework of EFL-TPACK. Qualitative insights supplement quantitative data, revealing common acknowledgment of ICT's motivational potential through multimedia elements and online tools (Rana, 2018; Laudari, 2019). The findings suggest that while English language teachers perceive ICT's benefits, addressing regional variations, qualification influences, and perceived barriers is crucial for improving its integration into education.

Practice of ICT in English Language Classes

The convergent mixed methods research design employed in this study provides a comprehensive understanding of the utilization of digital devices, digital

tools, and materials and the integration of ICT in ELT classrooms. The quantitative findings show these technological components' current status and level of usage.

The findings show that the quantitative results reveal a medium-level status in using digital devices in ELT classrooms. The findings suggest that computer/laptop usage is relatively high, while language laboratory/learning platform usage is notably lower. This variance indicates an expanded landscape of digital device implementation, highlighting the need for a targeted approach to specific tools. Furthermore, the analysis indicates a medium-level status in using digital tools and materials in ELT classrooms. In this regard, participation in social networks ranks highest, while developing test items online ranks lowest. This balanced usage pattern suggests potential areas for improvement and specialization.

Likewise, the quantitative data suggest a medium-level status in using ICT in pedagogical practices. Usage varies across different practices, with educational apps showing the highest proficiency and preparing materials for an interactive whiteboard showing the lowest. The results indicate diverse adoption rates for different pedagogical practices, emphasizing the need for clear understanding.

Regarding the use of digital devices in EFL classrooms demographically, a notable finding is a significant difference among districts. Geographically, the Kailali district demonstrates significantly higher usage than Achham and Bajhang in the sub-dimensions in the use of digital tools and materials, and the use of ICT in pedagogical practices. However, in using digital devices in the classroom, teachers from Kailali are slightly higher than others. The reason is that teachers in Kailali get a lot of opportunities for training, easy access to ICT, availability of ICT devices, tools, and materials, internet, ICT friendly environment in the schools, and involvement in other ICT-related part-time job opportunities than teachers from Bajhang and Achham who

have only ICT devices only Mobile phone, rarely used laptop, deprived of above opportunities. This finding resonates with Joshi's (2017) study that describes urban school teachers who had comparatively good practices in the use of ICT by which they have better feelings and are trained, and those having ICT instruments at home know its importance in teaching practices.

In addition, academic qualification influences the use of ICT devices, tools, and materials in the ELT classroom and pedagogical practices. Master/MPhil-qualification teachers exhibit slightly higher usage than those with a bachelor's degree. This suggests that the level of formal education might not be a significant predictor of digital device integration.

Furthermore, teachers with over 15 years of experience show a marginal increase in usage compared to their less experienced teachers. However, the difference is not statistically significant; indicating that experience alone might not be a determining factor. In addition, permanent teachers display slightly higher usage than temporary teachers. However, the difference is not statistically significant, suggesting that employment status might not strongly correlate with the utilization of digital devices. Similarly, teachers with digital devices exhibit higher proficiency than those without. Despite this, the difference is not statistically significant; emphasizing that access to personal digital tools does not necessarily translate to increased integration in the classroom. Such demographic variations can also be found in Al Harbi's (2014) study in which he attempted to indicate that the low level of ICT implementation was linked to several barriers, such as lack of ICT resources, unavailability of ICT policy and planning, including monitoring, evaluating, and motivation process, limited ICT knowledge and need for professional development, lack of time, and lack of technical support and maintenance. Similarly, Laudari (2019) emphasizes motivation, technology adoption, the process of skill refinement, and so on.

Moreover, schools with very good ICT facilities significantly perform better than others, underlining the essential role of infrastructure. This suggests that a supportive technological environment contributes significantly to the successful adoption of digital devices in ELT classrooms, as Paudel (2020) reveals challenges of using ICT in ELT classes to their effective implementation due to infrastructural limitations and pedagogical shortcomings.

Likewise, trained teachers exhibit significantly higher proficiency than untrained teachers. The importance of training in enhancing teachers' proficiency to use digital devices effectively is apparent, reinforcing the importance of professional development programmes.

For further analysis from the qualitative viewpoint, this section focuses on the details of ICT integration in ELT classrooms. The qualitative data, derived from class observations of English language teachers, provides detailed perspectives on the status of digital device utilization, the combination of digital tools and materials, and the integration of ICT in pedagogical practices. Six distinct vignettes, each representing a teacher's unique approach, serve as windows into how teachers incorporate technology into language instruction.

While observing the class vignettes, Gita's pedagogical approach aligns with tradition, emphasizing verbal communication, teacher-led discussions, and dependence on the textbook. Despite possessing a mobile phone, digital devices remain largely unused in teacher-centered classrooms. The potential of incorporating technology into teaching practices is evident, i.e., using mobile phones. Similarly, Ramesh's teaching style follows conventional methods relying on verbal explanations, teacher-led dialogues, and textbook references. Despite having mobile phone and laptop access, ICT tools are not integrated into the teaching process. The limited use of digital devices highlights the missed opportunities for technology-driven

improvements. The finding has been found in the line of D'Angelo's (2018) study that has presented a list of barriers to technology implementation within the classroom, such as the limited technical ability of students, lack of funding, feelings of isolation when learning, difficulty connecting with peers, distraction with other applications, and setting boundaries between class and personal life. Similarly, Shambu's class stands out as an exemplar of successful ICT integration, fostering an engaging and interactive learning environment. Using a laptop and multimedia projector, Shambu employs multimedia presentations, including PowerPoint slides, videos, and interactive activities. The active student participation and enhanced comprehension emphasize how ICT tools contribute to a dynamic and visually appealing classroom atmosphere. On the contrary, Rita's teaching approach supports traditional methods with limited technology integration. Her class accepts the need for a more inclusive and technology-rich environment, with her occasional use of the mother tongue emphasizing the importance of familiar language in communication. However, Umesh adopts a student-centered approach with effective ICT integration. Umesh creates an interactive and dynamic class using laptops, projectors, and video clips. The use of technology not only enhances student engagement and comprehension but also fosters collaborative learning. Creative tasks and technology-driven assignments contribute to an inclusive and immersive learning atmosphere, positioning Umesh's class as a model for successful ICT integration, as viewed by Liang et al. (2011). Furthermore, Harish's class presents a mixed approach, combining traditional methods with partial ICT integration. Integrating a mobile phone and video clips into traditional teaching techniques, Harish introduces a level of technology. However, the limited use and focus on specific students might hinder the creation of a fully

inclusive learning environment. Harish's class exemplifies the potential benefits of incorporating diverse ICT tools for more engaging lessons.

From the above vignettes, the common themes and reflections can be presented as conflicting methodologies, such as traditional versus technology-driven approaches in the English language class. Gita and Ramesh, for example, represent traditional teaching methods with limited ICT integration. However, Shambu and Umesh showcase successful ICT integration, creating dynamic and interactive classrooms. Moreover, Rita and Harish present a mix of traditional and technology-driven approaches. Such findings resonate with Rana's (2018) findings in which he revealed that differences in teachers' status and salary, insufficient ICT training, and lack of internet access hindered teachers' use of ICT in their educational activities.

Furthermore, the dichotomy of student-centered and teacher-centered environments could be observed in the class. In this regard, Gita and Ramesh emphasize teacher-centered environments with minimal student engagement. On the contrary, Shambu and Umesh prioritize student-centered environments with active participation facilitated by ICT tools. However, Rita and Harish demonstrate a need for more inclusive and technology-rich classrooms. It can also be seen that ICT was not fully integrated into their classroom teaching in Sudurpaschim Province, and this finding is not that surprising given that this also resonates with Shrestha's (2022) findings. This indicates that a certain gap between ICT-related knowledge and teachers' practice could exist in English language teachers.

Similarly, the impact of ICT on pedagogy could be explicitly seen in the English language class. Successful ICT integration, as seen in Shambu and Umesh's classes, enhances student engagement and comprehension. However, as observed in Rita and Harish's classes, limited ICT use may result in less engaging lessons and

hinder inclusive learning. Furthermore, the common insights from both quantitative and qualitative analyses illuminate the multifaceted nature of ICT integration in ELT classrooms. This finding is similar to Kolbakova's (2014) finding that using ICT in the teaching and learning process adds more work and additional struggle from teachers to meet the needs of every student in the class. ICT may not be appropriate for and in all situations and purposes; therefore, it requires considerable learner training to use it successfully.

Recognizing the regional complexities, demographic factors, and the transformative impact of training programmes becomes imperative in designing effective strategies for the future. The holistic understanding provided serves as a foundation for improving ELT practices through thoughtful and strategic ICT integration. The identified themes and reflections from the qualitative analysis, exemplified by the six distinct class vignettes, further enrich the alignment with EFL-TPACK. Gita and Ramesh's traditional approaches, characterized by limited ICT integration, reflect a reliance on content and pedagogical knowledge while lacking the effective incorporation of technological knowledge (Mishra & Koehler, 2006). In contrast, Shambu and Umesh's successful ICT integration showcases a harmonious balance of EFL-TPACK elements, creating dynamic and interactive classrooms.

Dialoguing with theoretical framework and literature, the quantitative findings reflecting a medium-level status in digital devices, digital tools and materials, and ICT in pedagogical practices resonate with the theoretical underpinnings of EFL-TPACK. The varying degrees of implementation across different tools and practices highlight the importance of understanding the dynamic relationship between technology, pedagogy, and content knowledge (Mishra & Koehler, 2006). The challenges identified, including limited resources, inadequate training, and disparities in

infrastructure, resonate with the practical implications derived from the study of various scholars (Buabeng-Andoh, 2019; Cosgun & Savaş, 2019; Wu et al., 2019).

The study's focus on the Nepalese context, including government initiatives, challenges, and regional variations, contributes to the broader discourse on ICT in education. The impact of the COVID-19 pandemic on ICT utilization in ELT aligns with the global shift towards online learning and highlights the necessity for addressing the digital divide (Rodliyah, 2018; Paudel, 2020). Theoretical frameworks like EFL-TPACK provide a lens to understand the complexities of ICT integration in diverse educational contexts (Mishra & Koehler, 2006). Furthermore, integrating ICT in ELT practices, as explored through the lens of EFL-TPACK and supported by the reviewed literature, provides a holistic understanding of the challenges, opportunities, and implications in the Nepalese context. The study highlights the need for targeted professional development, infrastructure improvement, and contextualized strategies to enhance ICT integration for improved ELT practices. The theoretical framework, informed by EFL-TPACK, serves as a guiding structure for understanding the complex interplay of technological, pedagogical, and content knowledge in the context of English Language Teaching (Mishra & Koehler, 2006; Dias & Atkinson, 2001).

In summary, this study employs a convergent mixed methods approach to investigate English language teachers' engagement with ICT comprehensively. The quantitative results indicate a medium proficiency level in various ICT aspects, with factors like district, employment status, and training influencing knowledge levels. The qualitative insights deepen the understanding, revealing diverse familiarity levels among teachers. Integrating with the EFL-TPACK framework, the study highlights ICT's diverse impact on motivation, pedagogy, self-learning, and professional growth.

Teachers perceive ICT as a valuable tool across various aspects of ELT. The quantitative data represent a balanced incorporation of digital devices, tools, and pedagogical practices in classrooms, while qualitative vignettes offer real-world examples of both traditional and innovative approaches. Findings align with existing literature, emphasizing the need for targeted support and professional development. This study contributes to the ongoing discourse on technology's transformative role in education, bridging theory, empirical evidence, and global perspectives.

Limitations of the Study

This convergent mixed methods research design, while providing valuable insights into the integration of ICT in ELT, is subject to several limitations. These limitations are caused by various aspects of the research design, the inherent nature of the phenomenon being investigated, the demographic context of the research site, and the unforeseen challenges encountered during the research process. Recognizing these limitations is essential for ensuring a well-rounded understanding of the study's scope and implications.

The study is limited to the use of ICT by ELT of Sudurpaschim provinces so the results of the study will not generalize in other settings. The results of qualitative information and observation were limited to six teachers for interview and six classroom observations which can not be generalized in the context of all three districts.

The measured knowledge of teachers in the use of ICT is limited in basic skills and knowledge like basic operating, use of hardware, and software of teachers hence further research is needed by focusing specific knowledge of updating tools like the use of artificial intelligence tools, paraphrasing tools, grammar correction tools and

others. Additionally, the knowledge of using ICT refers to simple digital tool-handling skills of teachers in this research.

One significant limitation arises from the study's small sample size (quantitative=222, qualitative=6) and the specific teaching contexts represented by the participants. The research was confined to the Sudhuraschim province, so the findings' generalizability to a broader population of secondary-level English teachers is limited. The limited participants might not adequately capture the diversity of teaching practices and perspectives across different Provinces and regions. A more extensive and geographically diverse sample could have enriched the study's applicability and insights.

Another limitation is methodological related to data collection. While surveys and interviews were employed as primary data collection methods, the scope for classroom observations was limited due to COVID-19, time, and logistical limitations. The absence of comprehensive classroom observations and in-depth interviews might restrict the depth of understanding regarding the difficult relationship between teachers' beliefs, actual ICT utilization, and its impact on students' language learning outcomes.

The research's focus on teachers actively interested in integrating ICT in Sudhuraschim Province introduces possible sampling unfairness. While this approach offers insights from motivated individuals, it may not fully capture the ground reality.

In the same line, using the research design and data collection tools in the Sudhuraschim EFL context enhances the study's depth and specificity. However, it also limits the study's applicability to different geographical and institutional contexts.

Moreover, unexpected disruptions due to the COVID-19 pandemic and subsequent lockdowns introduced methodological adaptations affecting the research

process. Acknowledging these limitations is essential for maintaining the study's credibility and ensuring its findings are appropriately interpreted.

My Reflection

I started my journey to learn about English language teaching integrated with ICT in the Sudurpaschim province of Nepal. I wanted to understand the challenges that people (teachers and learners) in these remote places face while teaching English. This strong desire pushed me to work hard and positively impact their learning opportunities.

At the start, I planned everything very carefully. However, there was a lot of uncertainty about the best way to study English language teaching in these far-off regions. After researching, attending workshops, and talking to experts, I planned what I needed to do. I decided to use a special study method that mixes numbers (quantitative) and stories (qualitative).

Reading many books and articles about English language teaching, my understanding grew a lot. What I knew at first became much bigger and deeper. I began to see how things like money, where people live, and how they live all affect their English language teaching/learning in these places.

Getting information from faraway areas was not easy. I faced many challenges, from problems with travel to understanding the local culture (many varieties in Sudurpaschim province). The way I planned my research helped. I collected both numbers and stories at the same time. So, I got a big and clear picture of English language teaching in these areas. Looking closely at this information showed me important things about how English language teaching works and how it affects the people living there.

My linguistic and cultural awareness made me conscious of different cultures and flexible. These skills will help me in my future work. Along the way, I reached many important places and people. I made a strong plan for my research, I successfully did surveys and interviews, and these moments showed me that I was on the right track. They reminded me of my goal and encouraged me to keep studying education in Nepal's remote areas.

Looking back, I can see how much I have grown personally and professionally. I became good at combining numbers and stories to learn more. The problems I faced made me stronger and better at working around unknown areas. These skills will surely help me in the future.

As I am getting closer to finishing my research, I am excited to bring all my findings together. I'm working on analyzing my data and sharing what I have learned with other researchers and the people in those communities. I think my findings can start important conversations about improving education in these remote areas of Nepal.

Looking back, my research journey has been like an adventure into the heart of education in Nepal's remote places. Overcoming challenges and discovering new things has made me even more committed to ensuring everyone gets a fair education, especially in English language teaching/learning. As this part of my journey ends, I am grateful for the opportunity to contribute to discussions about English language teaching in these distant places. I have gained new skills that will guide me forward in my studies and work.

Chapter Summary

This chapter provides a comprehensive synthesis of the research findings, organized into distinct sections on teachers' knowledge of ICT, their perceptions of

ICT, and their practices in the ELT classroom. It investigates the main insights regarding how educators understand and utilize technology, explores their attitudes towards ICT, and assesses the practical integration of digital tools in teaching. The chapter also addresses the study's limitations and offers reflective insights, creating a cohesive dialogue between the research outcomes and existing literature. This synthesis underscores the significance of the study in advancing our understanding of technology integration in education and highlights its broader implications for enhancing teaching practices through ICT.

Chapter Eight

Conclusions and Implications

This chapter presents conclusions derived from the collected findings and their discussions. Additionally, the researcher identifies the pedagogical implications along with areas for further research.

Conclusions

This comprehensive study explores English language teachers' knowledge, perceptions, and practices regarding ICT, uncovering their insights across various dimensions. The synthesis of quantitative and qualitative data provides a clear understanding of the current landscape, highlighting both strengths and areas for improvement in ICT integration in secondary-level English language education.

Teachers are better at using basic hardware and operating systems of digital devices. However, they show poor knowledge of using interactive whiteboards, managing files, and searching saved data on hard disks. Additionally, teachers have limited knowledge of novel digital apps like plagiarism checkers, paraphrasing tools, and grammar correction tools, indicating a need for updating their technological knowledge. They have also limited proficiency in internet surfing and pedagogical practices related to ICT applications, as well as basic digital tools like PowerPoint and YouTube.

Among the sample characteristics, ICT knowledge is comparatively higher among urban area teachers and those with higher qualifications. Teachers with access to digital devices at school and those who have received ICT-related training also show better knowledge. This highlights the importance of providing resources and training to 21st-century teachers. These results were corroborated by observations, not

just interviews and surveys. Therefore, the government and other stakeholders should develop specific plans to promote the digital skills of teachers in remote areas.

Self-reported perceptions of teachers towards the use of ICT, focusing on motivation, pedagogical attitude, self-learning, and professional development, are high. This indicates that teachers are highly motivated to use ICT in their instructional activities and professional development. The perception levels of both urban and rural teachers are similar, reflecting that rural teachers are also well aware of ICT use. Both trained and untrained teachers, and those with and without access to digital resources, show a high level of perception. This suggests that stakeholders should create an appropriate environment in institutions, especially in classrooms, for the proper use of digital resources.

The status of using digital devices such as language laboratories, learning platforms, tutorials/videos, and internet quizzes/online games is poorer in ELT classrooms. Teachers in urban areas, those with training, and those with access to digital resources have better results in using digital devices in ELT classrooms. Conversely, teachers in remote areas, those without access to digital devices at school, and those untrained in ICT are poorer in using these resources compared to their urban, well-equipped, and trained counterparts. Additionally, teachers are poorly utilizing digital resources in their pedagogical practices. The findings suggest that urban schools' teachers, those trained in ICT, and those with access to digital devices at school have comparatively better practices in using such resources in their pedagogical methods.

In summary, English teachers are highly motivated towards the use of ICT, however, their knowledge and practices are limited in their instructional activities. Urban, trained teachers with access to digital devices show better results, highlighting

the need for stakeholders to focus on promoting ICT knowledge and usage by providing digital resources and appropriate training in institutions and classrooms in secondary-level English language education.

Implications

The findings highlight the need for improved ICT training, better resource allocation, and enhanced infrastructure to address these gaps and enhance ICT integration in English language teaching. For this, the implications for practice-level, policy-level, and directions for further research are presented as follows:

There is a need for specialized professional development programmes that focus on advanced ICT skills. Training should cover the use of interactive whiteboards, educational software, and effective internet research techniques to address specific gaps in teachers' knowledge.

Schools should invest in upgrading digital infrastructure, particularly in rural areas. This includes providing modern computers, interactive whiteboards, reliable internet access, and technical support to address issues with outdated equipment and connectivity.

It is important to develop standardized guidelines for ICT use in classrooms. A framework should be created for integrating multimedia presentations, project-based learning, and differentiated instruction through ICT to ensure consistency and effectiveness in teaching.

Targeted support programs are needed for teachers in rural areas and those with limited experience. These programs should offer tailored training, resources, and technical assistance to address unique challenges and improve ICT integration.

Including ICT-focused components in teacher education programs is crucial. This ensures that new teachers acquire the necessary digital skills from the beginning and can integrate these tools effectively into their teaching practices.

A system for monitoring and evaluating ICT integration in classrooms should be implemented. Regular assessments will help identify areas for improvement and ensure that ICT resources are used effectively to enhance teaching and learning outcomes.

Policies should ensure that ICT resources are distributed equitably between urban and rural schools. Funding should be allocated to address disparities in digital infrastructure and provide equal access to technology for all schools.

Comprehensive national ICT training programs for teachers are necessary. These programs should be available to all teachers and include training on advanced digital tools, educational software, and integration strategies.

Teacher education programs and professional development should include ICT competencies. Curricula need to reflect current technological advancements to prepare educators for effective ICT integration in their teaching practices.

Investments in digital literacy initiatives should be prioritized. Programs that enhance foundational digital skills and promote effective technology use in education are essential.

Providing incentives for schools and educators who excel in ICT integration can be beneficial. Grants, awards, and recognition programs can encourage innovative and effective use of technology.

Research on effective ICT practices should inform educational policies. Data-driven insights can help ensure that policies address the real needs of educators and students.

Further research as longitudinal research can examine the long-term effects of ICT training and infrastructure improvements on teaching practices and student outcomes. This will provide insights into the effectiveness and sustainability of these interventions over time.

Another research can be done to investigate how ICT tools influence student achievement and engagement. This includes studying the impact of various digital tools and practices on learning outcomes.

Furthermore, the adoption and impact of emerging technologies, such as artificial intelligence and virtual reality, should be studied. Research can evaluate how these innovations can be effectively integrated into teaching practices and their potential benefits.

In this way, the implications outlined suggest a multifaceted approach involving professional development, equitable resource distribution, and policy reforms. Further research should continue to explore the long-term impacts of ICT interventions, the effectiveness of emerging technologies, and regional disparities in ICT access. By addressing these areas, educators and policymakers can work towards creating a more equitable and effective educational environment that leverages technology to enhance teaching and learning outcomes.

The finding of this study contributes to the continuous discussion on ICT in education, providing practical perspectives and recommendations to improve English Language Teaching in the context of Nepal. Progressing towards improved ICT integration is a collaborative effort involving policymakers, educators, and stakeholders working together to create a transformative and technology-rich learning environment for both students and teachers.

Implication for Further Directions of the Study

The presented discussions provide several possibilities for further research in ICT integration in ELT. These potential areas of exploration can contribute to a deeper understanding of the challenges, opportunities, and effective strategies related to incorporating technology in language education:

While the current research identifies medium-level utilization of digital devices, tools, and ICT practices could be further investigated into specific strategies that promote this utilization. This could involve identifying best practices, case studies, or success stories where teachers have effectively integrated ICT to enhance language learning experiences. By uncovering innovative pedagogical approaches that show various student populations, this research could provide strategies for teachers to employ.

The impact of teacher training and professional development on ICT integration qualities could be made a deeper exploration. Investigating the effectiveness of different training models, formats, and duration in enhancing teachers' confidence and proficiency in using technology can provide insights into optimizing training programmes. Additionally, examining the long-term impact of training on teachers' practices and students' learning outcomes can offer valuable information for designing sustainable professional development programmes.

The challenges identified in the current research, such as limited infrastructure and resources, demand further investigation into possible solutions. Research that proposes practical ways to address these challenges, particularly in resource-constrained settings, can contribute to equitable technology access. Identifying low-cost, contextually relevant solutions and examining their impact on enhancing ICT integration can offer actionable insights for teachers and policymakers.

While the current discussions focus on teachers' knowledge, perceptions, and practices, understanding students' perspectives is crucial. Investigating how students perceive and engage with technology-enhanced learning environments can shed light on the effectiveness of ICT integration from the learners' point of view.

A significant research opportunity involves assessing the actual impact of ICT integration on students' language learning outcomes. Researchers can quantitatively demonstrate the effectiveness of different ICT integration strategies by conducting longitudinal studies that measure language proficiency improvements, critical thinking skills, and overall engagement. This empirical evidence can inform evidence-based practices and guide teachers in optimizing their approach.

Exploring the influence of contextual factors, such as cultural norms, socio-economic conditions, and geographical location, on ICT integration is vital. Research examines that how these factors interact with technology adoption and utilization. This includes understanding how technology can be localized and adapted to students' cultural backgrounds.

Expanding the scope of research is to include various educational levels, such as primary, secondary, and higher education, can provide a holistic view of ICT integration. Comparative studies can uncover variations in practices, challenges, and strategies across different age groups, enabling researchers to identify trends and nuances in technology integration.

Investigating collaborative efforts among teachers for sharing successful ICT integration practices can encourage a culture of knowledge exchange. Research that explores teacher networks, online communities, or professional learning communities dedicated to technology integration can provide insights into how teachers can support each other in embracing ICT.

In conclusion, the discussions presented provide valuable perspectives on the current status of ICT integration in English Language Teaching. Expanding on these discoveries, these prospective research areas can continue contributing to the ongoing discourse on using technology to improve language education, resulting in more effective and inclusive learning experiences for students.

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Appendices

Appendix A: Part A: Demographic Information

Dear sirs/madams,

I hope this request finds you well. My sincere request to you is for your valuable participation in a Ph.D. research study I am conducting on “Use of ICT in English Language Teaching: Teachers’ Knowledge, Perceptions and Practices”.

The principal aim of my research is to investigate the use of ICT in English language teaching, particularly focusing on secondary-level English language teachers’ level of knowledge, their perceptions, and their practices while teaching English language skills and systems. I believe that your insights, practice, and experiences as an esteemed teacher would significantly contribute to the depth and richness of this study.

My research employs a convergent mixed methods research design which combines both quantitative and qualitative data collection approaches. The questionnaire I have designed for the survey study will gather the quantitative data for my study and the in-depth interview along with classroom observation will provide the qualitative data/information. The convergence of these two methods will provide a comprehensive understanding of how ICT is being utilized in English language teaching classroom settings and its impacts on English language teaching learning.

Your participation would involve completing a survey questionnaire that will take approximately 30 minutes of your valuable time. Your responses will remain confidential and will be used solely for research purposes. Your insights will contribute to the broader understanding of ICT integration in English language teaching.

I have attached the survey questionnaire herewith and request you if you are willing to participate, please complete the enclosed questionnaire at your earliest convenience. Your participation in this study would be greatly appreciated. By sharing your experiences and perspectives, you will be contributing to the advancement of knowledge in the field of ICT in English language teaching.

If you have any questions or concerns about the study, please feel free to contact me at my email or the contact number provided herewith. I sincerely hope you will consider being a part of my study.

Thank you very much for your time and consideration.

Sincerely,

Dhurba Kumar Shahi (PhD Scholar)

Faculty of Education, TU

Demographic Information

Name:

School:

Address: a. Kailali b. Achham c. Bajhang

Academic Qualification: a. Bachelor b. Master c. M. Phil. d. Ph. D.

Teaching Experiences: a. Less than 5 years b. 5-10 years c. 11-15 years
d.16-20 years e. More than 20 years

Employment status: a. Permanent b. Temporary

Please tick (√) the option to which you feel that best fits you.

1. Do you have a personal computer or a laptop?
a. yes b. no
2. Availability of computers and internet access at school.
a. very good b. good c. moderate d. poor
3. Have you attended training related to ICT use?
a. No b. Yes, please specify:.....

Part B

Teachers' Knowledge of ICT Use in English Language Teaching and Learning

Please tick (√) the extent to which you feel that best fits the following statements.

SD = Strongly Disagree A = Agree D = Disagree SA = Strongly Agree UD =

Undecided

S.N.	Statement	Response				
		SD	D	A	SA	UD
A. Familiarizing With Hardware Usage						
1	I know how to operate a Tablet/Mobile Device.					
2	I know how to operate and use multimedia in the classroom.					
3	I can use of digital camera.					

4	I can prepare digital materials to use with an interactive whiteboard.					
5	I can use storage devices (Hard disk, pen drive, etc.).					
B. Fundamental Concept of Digital Device						
1	I can turn on and shut down computer Computer/Laptop					
2	I know basic the operating PC (using a keyboard, mouse ... etc)					
3	I can organize files and folders on the computer.					
4	I can manage the files (save, delete, move create, etc.).					
5	I can search for the saved data on the hard disk or compact disk.					
6	I can print/photocopy documents.					
C. Educational Apps and Software						
1	I know how to use word processor software (e.g. MS Word).					
2	I know how to use presentation software (e.g. MS PowerPoint).					
3	I know how to use the spelling checker software e.g. Grammarly.					
4	I know how to use the e-dictionary.					
5	I know how to use the paraphrasing software.					

6	I know how to use plagiarism software.					
7	I know how to use the English grammar checker software.					
8	I know how to use the pronunciation software.					
9	I can design programmes (Adobe Photoshop, Flash, Paint, digital photos movies, or other graphics).					
10	I can use a spreadsheet to plot a graph (MS – Excel).					
11	I can download and install software and mobile Apps.					
12	I can use virtual classrooms with Zoom, Teams, Google Meet Google Hangout, etc.					
D. Internet surfing						
1	I know how to use the Google site for authentic ELT materials.					
2	I know how to use the sending and receiving SMS, E-mail, etc.					
3	I know how to use Web-Based Applications (e.g. <i>YouTube</i> ,) in teaching and learning.					
4	I can edit text online.					
5	I can develop a questionnaire online.					
6	I can search the information on the Internet.					

7	I can participate in social networks (e.g., Facebook, YouTube, Viber, Skype, WhatsApp).					
8	I can download or upload curriculum resources from/to the website or learning platforms for students to use.					

E. ICT in the Pedagogical Practices						
1	I can use ICT in teaching by employing collaborative learning.					
2	I can use ICT to represent the English language communicating ideas.					
3	I can use ICT to communicate English processes.					
4	I can use ICT to solve English language problems e.g. spelling, meaning.					
5	I can use ICT in teaching by employing direct instruction.					
6	I can use ICT in teaching by employing discovery learning.					
7	I can use ICT in teaching that enhances English language content and how it is taught.					
8	I can use ICT to teach topics of English that are better learned when employing specific teaching approaches.					
9	I can use ICT to incorporate authentic tasks in the teaching of the English language through project-					

	based learning.					
10	I can use ICT to teach students to develop their English language problem-solving through inquiry-based learning.					
11	I can produce a text using a word processing programme.					
12	I can suggest to students about internet surfing for English Language learning.					
13	I can suggest to students about ethical issues in using digital resources.					
14	I can make a good blend of ICT tools in my face-to-face teaching.					

Part C

Teachers' Perceptions Towards the Use of ICT

Please tick (√) the extent to which you feel that best fits the following statements.

SD = Strongly Disagree A = Agree D = Disagree SA = Strongly Agree UD =

Undecided

No.	Statement	Responses				
		SD	D	U	A	SA
	A. ICT as a Tool for Motivation					
1	It makes learning activities interesting and enjoyable.					
2	It helps to foster positive attitudes of students toward learning.					
3	It makes it easy to control the classes.					

4	It can increase students' motivation.					
5	It gives the students a better understanding.					
6	It enhances learners' independence in learning.					
7	It helps to decrease the class repetition rate of students.					
8	It helps to increase the attendance rate of students.					
9	It helps to decrease the dropout rate of the students.					
10	It helps to increase the enrolment rate of students.					
11	It provides convenience in monitoring students 'learning progress'.					

B. ICT as a Tool for Pedagogical Practices

1	It makes the learning process more effective.					
2	It replaces teachers' role in teaching English.					
3	It is more effective for teaching and learning than books and other printed materials.					
4	The use of ICT in learning activities is quite easy and is not troublesome.					
5	It provides convenience in meeting the needs of learning resources.					
6	It makes teaching and learning easier, faster, accessible, and fun for teachers to explain the concept of the lesson.					
7	It is more effective for teaching and learning than books and other printed materials.					
8	I feel confident to teach English on the computer.					
9	It seems effective in developing language skills and aspects					

	of English.					
10	ICT improves the presentation of materials for my lessons.					
11	It helps to increase the quality of education.					
13	It helps to increase the student's achievement.					
14	It provides convenience in storing teachers' and students' documents.					
C. ICT as Tools for Self –Learning						
1	It provides convenience in communication.					
2	It suggests internet surfing for English Language learning.					
3	It suggests to students about ethical issues using digital resources in English Language teaching and learning.					
4	It is highly needed by teachers in teaching English.					
5	It makes it easy for teachers to explain the concept of the lesson.					
6	I enjoy using computers to learn English.					
7	It helps to develop documents, notes, etc.					
ICT as a Tool for Professional Development						
1	It helps to increase my confidence.					
2	It helps in developing teacher autonomy.					
3	It enhances my career prospects.					
4	It helps me to discuss teaching ideas.					
5	It increases knowledge of different sectors.					

6	It develops lifelong learning and professional growth.					
7	It (referring generally to computers, videos, Hardware Usage, software, and networks) increases my knowledge and skills as an English teacher.					

Part D

Practices of ICT in English Language Classrooms

Please tick (√) the extent to which you feel that best fits the following options.

Options: Never, Rarely, Sometimes, Often, Very Often.

No		Intensity				
		N	R	S	O	VO
A. Use of Digital Devices in the ELT Classroom						
1	Computer \Laptop					
3	Language Laboratory /learning platform					
4	Slides/ PowerPoint					
5	Computer Lab, when necessary, in teaching					
6	Multimedia projector					
8	Use of digital boards					
9	Tutorials/videos					
10	Internet Quiz/Task/ Online Games					
11	Use of Smartphone/mobile					
12	Web/blog					

B. Use of the Digital Tools and Materials in ELT classrooms

1	Produce a text using a word processing program.					
2	Use emails to communicate with others.					
3	Capture and edit digital photos movies or other graphics.					
4	Developed test items online					
6	Organize computer files in folders and subfolders.					
8	Send a file through email to students or teachers.					
9	Create a presentation with simple animation functions.					
12	Create a presentation with video or audio clips.					
13	Create and maintain blogs or web sites.					
14	Participate in social networks.					

C. Use of ICT in the paralogical practices in the ELT classroom

1	Using grammar checker, pronunciation, and					
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	paraphrasing software					
2	Use of learning management system tools like Google Classroom					
3	Use virtual classrooms with Zoom, Teams, Google Meet, Google Hangouts, etc.					
4	Participate in social networking as Facebook, Viper, WhatsApp					
5	Using educational apps					
6	Suggest students about internet surfing for English Language learning					
7	Suggest students about ethical issues in using digital resources					
8	Prepare materials to use with an interactive whiteboard					

Thank You for Your Kind Cooperation and Information.

Appendix B: Interview Guidelines for Qualitative Data

My objective is to explore the Use of ICT by the participants focusing on their level of knowledge, their perceptions, and their practices. For this, I will have the following broad questions in my mind for an in-depth interview.

Knowledge of ICT:

1. What is your understanding of ICT? Can you elaborate on the types of ICT tools you are aware of?
2. How would you describe your technical skill level with ICT tools? Can you provide some examples of when and how you have used these tools in your teaching?
3. Have you received any training or professional development related to the use of ICT in English language teaching? If so, could you share your experiences and what you learned from these sessions?
4. What kinds of challenges have you faced, if any, in learning about or trying to use ICT in your teaching?

Perceptions:

1. How do you perceive the role of ICT as a tool for motivation in English language teaching and learning?
2. How do you perceive the role of ICT as pedagogical activities in English language teaching and learning?
3. How do you perceive the role of ICT as a tool for self-learning in English language teaching and learning?
4. How do you perceive the role of ICT as a tool for professional development in English language teaching and learning?

Practices and practices

1. What sorts of ICT tools and devices do you use to teach language skills and systems?
2. How do you use ICT tools and materials to teach language skills and systems effectively?
3. Is there anything else you would like to share about your experiences with integrating ICT in English language teaching and learning?

I will ask them these questions in Nepali/or English languages in different ways, paraphrasing and breaking them down into smaller ones to elicit the intended information.

Appendix C: Classroom Observation Guideline

My research study aims to explore the incorporation of ICT tools in teaching English at the secondary-level language class. During the observation process, I will concentrate on examining the various sorts of ICT devices and their use integrating into English language teaching in their pre-, while-, and post-phases of teaching.

Specifically, I will focus on the following aspects:

1. The types of ICT tools utilized by English language teachers during their language classes.
2. The strategies employed by English language teachers when integrating ICT tools into their teaching methods.
3. The lesson contexts in which ICT tools are employed by English language teachers.

Appendix D: Sample of Classroom Observation

It was the day of 5th Ashwin, 2078 BS, I went to Ganga Secondary School with my participant Mr. Umesh. On the way to school we discussed with each other informally. After we reached the school, I visited the Head Teacher and greeted him. Immediately, I told the reason why I came there. He became happy listening to me. After a few minutes, the bell rang up ‘Tin... Tin... Tin...’. I saw all the students gathering in the field for the morning assembly. After its completion, all the students went to their classrooms line by line. I found they were trained like the Nepal army. Along with the teachers, I entered into the office room. Firstly, I introduced myself to all of them and told them my purpose. They welcomed me warmly. In reply, I thanked them. Later on, I and my participant went toward the Class 9 classroom.

I greeted all the students and sat on the back bench silently. Firstly, the teacher greeted the students saying ‘Good Morning, students!’ They stood up and replied ‘Good Morning, sir!’ All the students sat down. Then, the teacher wrote down the topic ‘Asking for Permission’ on the board and returned to the classroom and told the students to copy the title. After that, all the students started copying the title.

During the presentation phase, the teacher employed an innovative approach by showing a video clip containing a short conversation centered on asking for permission. This engaged the students and set the tone for the topic. The teacher then displayed a list of components related to the conversation, encouraging a discussion about their uses in both formal and informal contexts. Students actively watched the video and participated in the discussion, demonstrating their involvement in the learning process. The teacher's use of ICT materials, such as internet browsers and a laptop, contributed to preparing and delivering the lesson effectively. Then, he showed the e-course book page no 69. There were three exercises A for structure by

giving sentences, B for pair's conversation giving the situation. He involved the students in discussion in pair conversation then one asked permission and another responded. The class should seem lively. He facilitated where they got confused.

During the practice phase, he divided the students into two groups and instructed them to make conversations based on the given text exercises B, and C. Two students were chosen to present a dialogue, specifically focusing on asking for permission. The students are busy in conversation, for application of the topic. The use of laptops and projectors facilitated their presentation, making their contributions more engaging and visually interesting. ICT tools played a crucial role in enhancing the students' preparation and presentation of the content.

During the evaluation phase, the teacher prompted the students to provide appropriate expressions for specific situations. Students actively participated by sharing answers and engaging in the evaluation process. This active involvement indicated their understanding and retention of the material.

At last, he summarized the text, reinforcing key points and concepts covered during the session. This summary helped combine the student's learning and provided closure to the lesson. Students were assigned homework that required them to write conversations for given situations in their textbooks. They were encouraged to share their work with both their peers and the teacher. He requested the students use their parents' smartphone for further understanding. The teacher's use of internet resources and a laptop highlighted the integration of ICT into homework assignment practices.

I saw while the teacher started asking questions, some of the students seemed active and some seemed horrifying and bowing down their heads. However, when he used ICT materials they seemed curiously watched and carefully listened. Some of the front benchers wanted to respond frankly. The teacher, I think, seemed quite careful

about the classroom activities of the students. I could see that the teacher was carefully controlling the class in the classroom. However frequently, he inquired with the front benchers. Being the class overcrowded, he could move along and across the classroom too. I think he effectively like to have done so as well. In my observation, he moved the entire classroom most of his class time.

Accomplishing his teaching, he said goodbye to all of them and came out of the classroom. After some time, I came out of the classroom too.

Appendix D: Sample of Interview (note-taking)

In-Depth Interview with Participant 3

Interviewer: Dhurba Kumar Shahi

Interviewee: Harish

Date: 2078-7 -13

Time: 11 AM

Knowledge

Familiarizing With Hardware Usage

- Hardware usage in ICT means the real things we use with technology every day. Like computers, laptops, tablets, phones, digital boards, interactive whiteboards, digital cameras, microphones, printers, scanners, projectors, memory, input, output, and storage devices, cables, connectors, servers, networking devices, security devices, backup, recovery devices, etc. I know most of them.
- In my English classes, I use my laptop, smartphone, and multimedia projector a lot to make my lessons interesting but they are digital stuff for my students.
- I also talk to them using my smartphone.
- It helps me send messages, answer questions, and even ask them quick questions to see if they understand.
- This Hardware Usage makes my teaching better and helps me talk to my students easily. Not only I use them in school but also, but I also use them out of school for professional activities; proposal writing, teaching in computer institutions, and so on. So, I know Hardware Usage for ICT devices. In my line, they are essential parts like my body organs.

Fundamental Concept of Digital Devices

- I had limited knowledge about ICT digital devices before, but when the COVID-19 pandemic hit worldwide, I had the opportunity to learn more about them through virtual classes.
- During that time, I had sufficient time to improve my understanding. All teachers had to adapt and learn, and I also decided to invest in a laptop. Through this, I gained a considerable amount of knowledge and started using digital devices both at school and outside.
- As for the fundamental digital devices, I feel very confident about them. Starting and shutting down computers or laptops is a breeze for me. I'm adept at using the keyboard and mouse, organizing files and folders, handling tasks like saving, deleting, moving, or searching for data, as well as efficiently managing printing and photocopying documents.
- This proficiency enables me to smoothly handle these tasks and guide my students through them without any hesitation.”
- Providing authentic sources, tools, and materials, encourages to learn by imitating the way of learning as in the natural way of learning. Similarly, it makes long-lasting learning so, its result of learning can be better.

Educational Apps and Software

- Educational apps and software are digital tools that help with teaching and learning.
- I know how to use Microsoft Word, PowerPoint, and Excel well. I use them to make lessons that look nice, keep track of how students are doing, and make

presentations that interestingly show data. I'm also good at using Adobe Photoshop to make cool pictures for my lessons.

- I use interactive apps in my classes to get students excited and help them be creative. I care about making sure all students can learn, so I use special keyboards.
- I use language apps to help different types of learners do well in my class. I'm good at Microsoft Word, PowerPoint, and Excel, which help me make good learning material. These tools make my teaching better and help students understand more.
- I also use safe online classrooms like Zoom and Google Meet to make sure students are secure while learning online.

Internet Surfing

- I explore credible online materials as well as other relevant resources when creating educational content.
- I assist students in navigating internet searches, which adds an element of excitement and enjoyment to my classes.
- However, incorporating this approach consistently into the classroom setting is not always feasible.

ICT in the Pedagogical Practices

- I use technology, like computers and the internet, to make learning English more interesting and fun.
- I use online tools that help students work together, and I show them videos and pictures to explain English ideas better.

- I teach them how to use the internet responsibly and find good information.

By mixing traditional teaching with these new tools, my students learn English in a cool and helpful way that prepares them for the modern world.

- ICT can facilitate the teaching-learning process as they browse Google and search for what they need. Moreover, they might find various answers to the questions which are amusing to them.

Perception

ICT as a Tool for Motivation

- I believe ICT is a powerful motivational tool. When I incorporate multimedia elements like videos, interactive quizzes, and online discussions into my lessons, I see an increase in student engagement and enthusiasm.
- It helps make the learning experience more dynamic and relevant, capturing their attention and motivating them to participate actively.
- ICTs can motivate students by providing a dynamic and interactive learning environment. They can make learning more enjoyable through gamified activities such as Quizizz, and multimedia presentations.
- By incorporating ICTs, students can also have more autonomy in their learning, as they can access resources and practice language skills at their home and own pace.
- Students can be motivated to use ICT in their learning activities as they are interested in using smartphones to search for the meaning of difficult words and laptops to listen to various speeches of people in natural settings.
- I do. I realized that learning by doing is the best process of language learning. Moreover, the students practice by themselves by using these sources themselves which motivates them to learn.

ICT as a Tool for Professional Development

- ICT has brought a revolution in professional development for me. Online courses, webinars, and educational platforms offer a wealth of resources right at my fingertips. I can stay updated on the latest teaching methods, and language trends, and even connect with teachers globally. It's an invaluable tool for continuous learning.

- ICT enables me to reflect on my teaching practices. Sometimes I record my class and review myself to improve my teaching. I also tally my class against the classes available on online resources such as YouTube.
- It supports the students to be involved in the teaching and learning process through innovative ways of learning. Moreover, they can support learning by encouraging them to engage in learning and reduce their stress and fear of the learning process which they learn by engaging themselves in lifelong learning and professional development.

ICT as a Tool for Self-Learning

- Learners can use digital libraries and online reading platforms for effective learning. It has a vast of literature in varied forms at different sites.
- It also encourages independent reading, comprehension, and discussion of various texts.
- It helps the students improve their listening skills, expand their vocabulary, and gain exposure to real-world English language usage.
- ICTs are more effective for teaching and learning than other materials because they offer dynamic and interactive learning. They provide access to a variety of resources.
- ICTs can simulate real-world scenarios, facilitate authentic language use, and enable immediate feedback, thereby enhancing the effectiveness of the teaching-learning process

ICT as a Tool for Pedagogical Practices

- I can use multimedia presentations using tools like Microsoft PowerPoint, and slides from online sources. These presentations can include visuals, audio, and

interactive elements to make the content more compelling and facilitate better understanding.

- Mobile phones and laptops can be useful in ELT for improving access to information for my students because they have access to these tools and electricity facilities.